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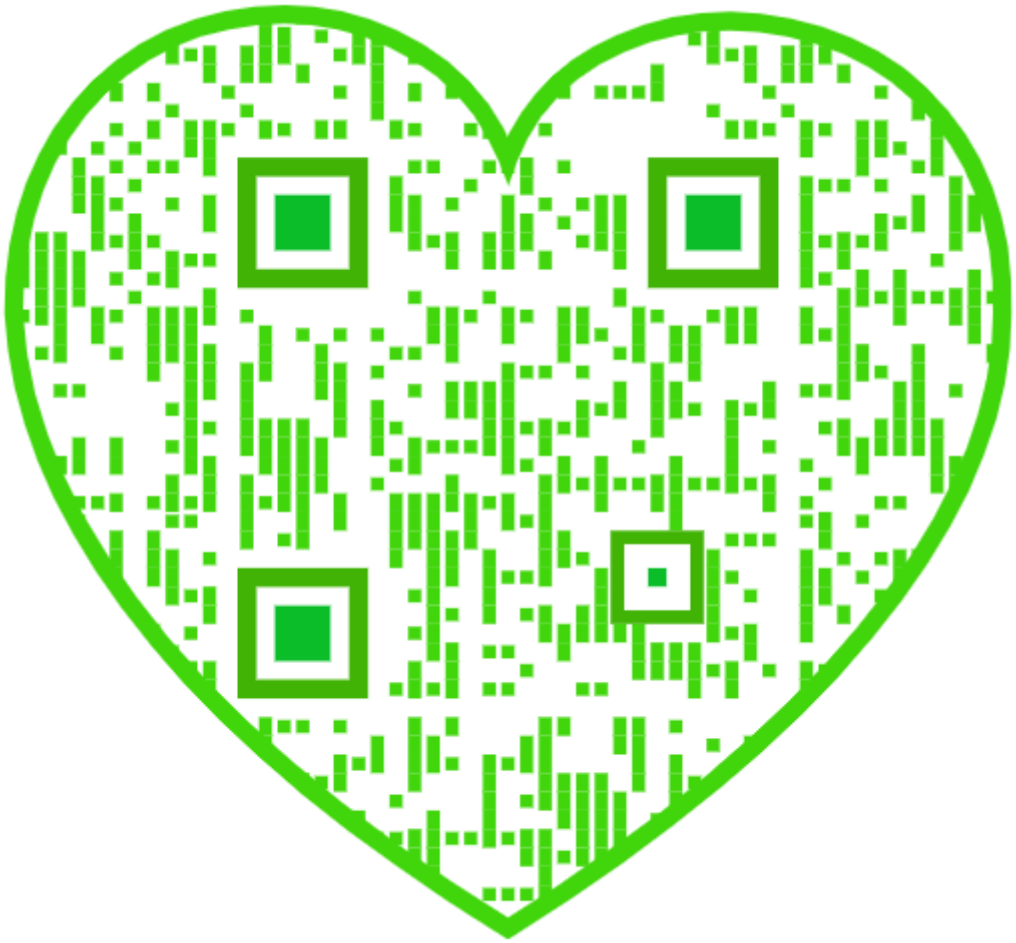

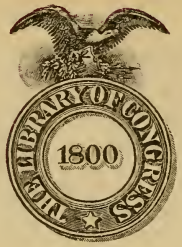

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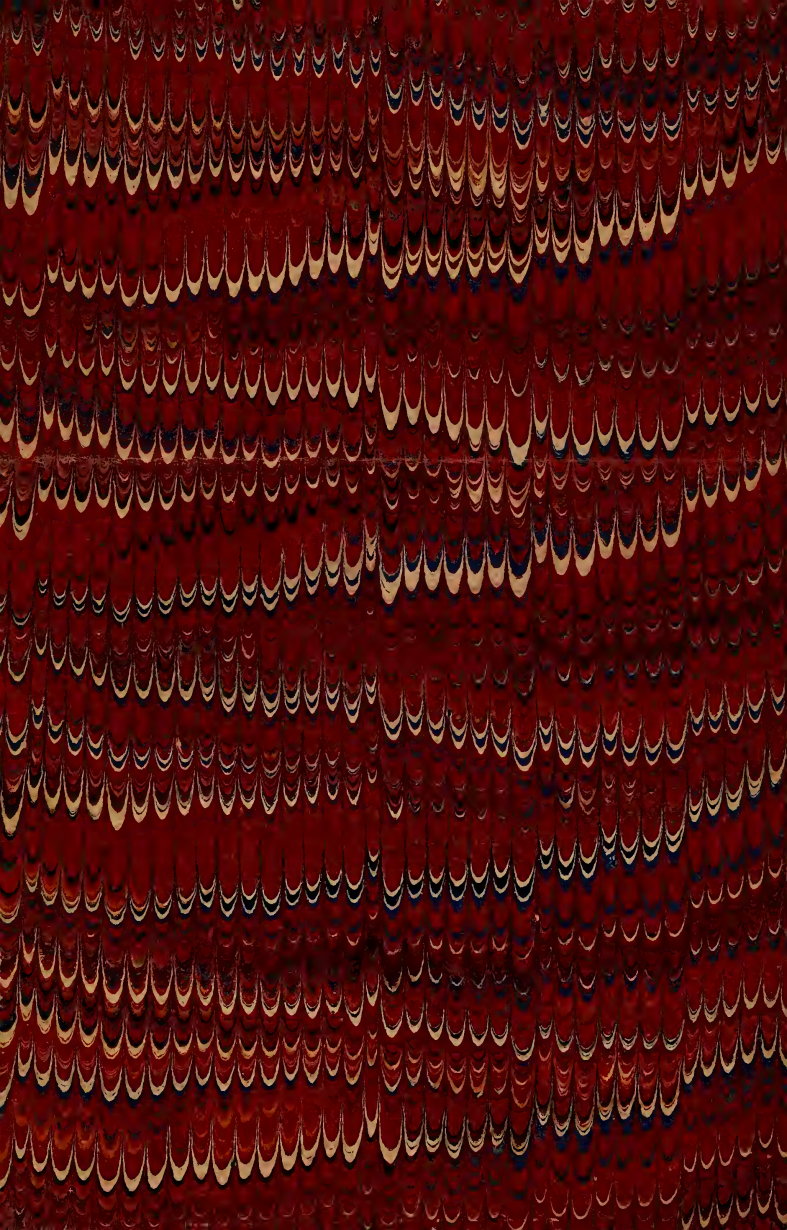

EVERY MAN

HIS OWN

Horse Doctor;

OR

THE TRUE WAY

OF

HANDLING HORSES.

BY

F. BARTOW.

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INTRODUCTION.

The Author of this book was born in the town of Lyons, Ionia County, Michigan, in the year of our Lord 1841, and when at the age of twelve years he lived neighbor to a man who had a span of very ugly colts; in fact, they were so bad there was scarcely any one in the town who would go into the yard where they were. Boy as he was, he made up his mind to break these colts; and he used to go some half a mile back in the field to an old barn where the colts ran, and, all alone by himself, he would get them into the barn and train them. After he had trained them about a month, one day he was standing by when the owner of the colts remarked to one of his neighbors that "he would give twenty-five dollars if he could get some one to break his colts, and would board them while they were doing it." The boy spoke up and said "what will you give me to break your colts for you?" The man laughed at him, and told him that he would "give him a silver dollar if he would just go into the old barn and drive them out." "Done!" said the boy. They started for the barn, and when they got there the boy got over into the yard and spoke to the colts; they both came up to him and he took one of them by the foretop, led him into the barn and the other followed immediately after. On entering the barn he raised a board from the floor, took out his father's old plough-harness and put it upon the colts and drove them all around the yard and from there to the house. He then hitched them to a sleigh and invited the owner to have a ride. "No," said he, "they will run away and break my neck and yours too. "I will risk that," said the boy. "I have driven them every day all winter, up in the back lot; and I have drawn six and seven rails at a time with them, around in the edge of the woods where you could not see me." "Well," said the man, "if that is the case, I will get in and see how they go." The man rode one mile and back, and then he told the boy that "he would give him the twenty-five dollars and ten dollars beside, if he would drive them two weeks." He did so, and before that time had expired the women could drive them as well as any one. From that day on, he was always training and handling horses and studying the nature of that noble animal, the horse, and trying to find out what was the most natural for him. Ugly horses were his favorites; but within the past few years he has given up traveling or training horses, and has deemed it best to write a small pamphlet for the use of horse dealers and the public in general.

B.

TO THE READER.

I am well aware that many persons have formed the erroneous idea that a small book cannot be worth as much as a large one. They seem to have overlooked the simple, but very important fact, that genuine value consists in merit and not in bulk. In these pages, briefness has been kept strictly in view, in order to give as much information as possible in a small compass.

Probably no particular class will be as much interested or benefited by this work, as farmers and owners of horses. The system of horse-training, as taught in this work, will supersede all others, inasmuch as it is the best and only true system. Never before, has there been such a vast amount of valuable information, in reference to this noble animal, concentrated and published in any one volume for the benefit of the community at large.

THE AUTHOR.

EVERY MAN HIS OWN HORSE DOCTOR.

This Book contains a full and complete Essay on the proper treatment of that noble animal, the horse. How to train and educate, how to keep him in the best condition, also how to prevent and cure the numerous diseases to which he is liable. And now I present this book to the community at large, with the most earnest wish and hope, that its great importance and true value will be fully appreciated.

The True Way to Break Horses.

The first, and most important thing to be accomplished, is to win the horse's confidence; which may be done by uniform actions of a kindly disposition in his management. He takes man for what he proves himself by actions. By kind treatment, he learns to associate with man's feelings of protection and security, and he can have no fear or doubt, because never taught to doubt by deception. The child has confidence in his parents in proportion to the fidelity of the parents, in inculcating and practicing those principles of truth in his early training. But once finding them unmindful of their promises, confidence in them is correspondingly impaired. If you are faithful in fulfilling your promises to the child, he will expect exactly what you promise.—Here proof becomes faith; because he has never been deceived by the want of performance. Even among men, the principle is the same—that that man who is always found truthful, and who performs exactly as he promises, becomes a standard of public confidence and trust—but he who disregards truth and principles of honor, becomes an object of suspicion to all knowing him. As the child, then, is the reflex of the love and truth of the parents in confidence and the public in him of undoubted integrity, so we are forced to believe, the horse becomes in the character of his habits, what he is, in exact proportion to the teaching and example to which he may have been subject.

How to Feed, Water, and Drive Horses.

Do not feed or water heavy just before driving, filling the stomach with water and food. Water destroys the juices of the stomach, weakening digestion; the grain becomes swollen and generates a gas,

filling the stomach with wind; the stomach becoming diseased the bot will work his head into the coating of the stomach. All grain will digest best while the horse is standing still, and all food that passes off without digestion, weakens the action of the stomach and bowels, and in many cases will scour the horse. The less you feed just before driving the better. Then again, you should water very little on the road, and feed mostly at night; the food will then digest and make flesh and blood. I should advise not more than two quarts in the morning and the same at noon. I do not feed in the morning, neither do I water.—If I was going to make a long and fast drive, I should feed twelve quarts the night before, then my horse would feel strong, light and active, and do his work easy. By giving him a little water, the horse will fully digest what he has eaten; if you weaken the juices, of course you weaken digestion. A horse should only be fed what he can easily digest. I think by so doing you will save one third of the grain formerly given. Diseases are caused by too much food and water. Water destroys the juices and disables digestion. By feeding most of the grain while the horse is at rest, it will digest and leave the horse strong and able to do his work; giving a great amount of water diseases the blood and diseases the hair, the water having to pass in some way: it cannot all pass in the urine, and therefore passes off through the pores of the skin and causes the hair to become gummed and makes the horse very hard to clean. So much water passing off through the pores of the flesh, destroys the roots of the hair and causes it to look dull and faded. Then again, you should be cautious not to drive your horse into cold water or throw water on him when warm; so doing chills the blood and separates it from the watery substance that the blood forms from, and causes diseases. The skin will become full of small tumors and the hair fall off. By avoiding too much water on the road, and too much food before driving, and by keeping the horse warm after driving, you avoid disease.

Special Advice in Reference to Feeding Horses.

Never give a horse whole grain. By bruising and wetting it, you save thirty per cent. of its nutritious effect. Steam it in preference to wetting if you have the facilities for so doing. Feed your horse two hours before he begins his day's work; give him the largest feed at night. Never tie him to a rack; it is cruel to thus prevent a horse from lying down when he is tired. The best way, is to take away your rack altogether, and arrange your stable so as to make it unnecessary to tie him at all. The stable should always be dry and well littered. Never give your horse hard water if soft water can be obtained; if you cannot get soft water, draw the hard water from the well two hours before you let him drink it. Beans should be full a year old before they are fit to feed to horses, and they should be bruised the same as grain, not ground.

Horse-Feed Mixture.

Youatt recommends the following mixture for horse feed: Of cut hay two parts, cut straw three parts, add to this a quantity of bruised beans, oats or other grain; wet the whole with soft water and mix it well. Do not feed your horse too much hay, as it is not only a waste of provender, but when he is put to work with an overloaded stomach it endangers his wind. If left to pull hay out of a rack at pleasure, a horse will eat, or waste some thirty pounds a day, whereas by cutting the hay and mixing it with other feed as above described, ten pounds is an abundance for twenty-four hours. Horses when worked should be fed three times a day, with a mixture of hay, straw and grain, as above described. Give them their food in the manger, and be careful that it is sweet and clean. By following these rules, horses will then always be in good condition, will not have that swelled belly so peculiar to animals who are allowed to fill their stomachs with hay, and will usually enjoy good health.

How to get a Colt from Pasture.

Go to the pasture and walk quietly around the whole herd, at such a distance as not to cause them to scare or run, then approach them slowly. If they raise up their heads and seem to be frightened, hold on till they become quiet again, so as not to run them before you are close enough to drive them in the direction you want them to go. When you begin to drive do not begin to flourish your arms nor halloo, but gently follow them off, leaving the direction clear which you wish them to take, thus taking advantage of their ignorance, you will be able to get them in the pound as easily as the hunter does the quails into his net; for if they have always run in the pasture, uncared for, as many horses do in prairie countries and on large plantations, there is no reason why they should not be as wild as the sportsman's birds, and require the same gentle treatmant if you want to get them without trouble.—The horse in his natural state, is as wild as any of the undomesticated animals, though more easily tamed than most of them.

How to Stable a Colt.

The next step will be to get the horse into a stable or shed. This should be done as quietly as possible, so as not to excite any suspicion in the horse of any danger befalling him. The best way to do this, is to lead a broken horse into the stable first, and hitch him; then quietly walk around the colt and let him go in of his own accord; be deliberate and slow in your movements, for one wrong movement may frighten your horse and make him think it necessary to escape at all hazards, for the safety of his life, and thus make two hour's work of a ten min-

utes job, which would be all your own fault and entirely unnecessary, for he will not run unless you run after him; nor will try to break away unless you try to force him into measures; if he does not see the way at once, and is a little fretful about going in, do not undertake to drive him, but give him a little less room outside by gently closing in around him. Do not raise your arms, but let them hang at your side, for you might as well raise a club. The horse has never studied anatomy, and does not know but they will unhinge themselves and fly at him. If he attempts to turn back, walk before him, but do not run; and if he gets past you, encircle him again in the same quiet manner, and he will soon learn that you are not going to hurt him; then you can walk so close around him that he will walk into the stable for more room, and to get farther out of your way. As soon as he is in, remove the quiet horse and shut the door. This will be his first notion of confinement, not knowing how he got into such a place, nor how to get out of it, that he may take it as quietly as possible, see that the shed is entirely free of dogs, chickens or anything that would have a tendency to annoy him; then give him a few ears of corn and let him remain alone for about half an hour, until he has examined his apartment and become reconciled to his confinement. Now while your horse is eating, see that your halter is all ready, and reflect upon the best mode of operation for in horse-breaking, it is highly important that you should be governed by some system.

The Object of Fear—How to Prevent Fear in a Horse.

Whatever the horse understands to be harmless he does not fear—consequently, great pains should be taken in causing him to examine and smell such things as are likety to frighten him in after life. This should be attended to in his early education, since early impressions are strong in the horse. A log or stump by the roadside, if regarded with suspicion, should be approached slowly and cautiously. To the imagination of the horse, such things are supposed to be some great beast that may spring upon him, but which he will soon comprehend to be harmless if obliged to examine its nature in his own way, by advancing to the object quietly and allowing him to understand it fully, by smelling and breathing with the nose. The boy frightened by a false face, will care nothing about it after he takes it in his hands and examines it. The principle is the same in familiarizing horses to objects of fear. If your horse is frightened at an umbrella you can soon learn him to be used to that. Go into the stable, first let him look at the umbrella before it is opened; let him touch it with his nose; open it a little way and let him see it, and finally open it wide before him.—By ordinary patience, you can soon learn the horse to have the umbrella opened sudenly in his face, without his being afraid of it. By similar treatment you can break any horse from scaring at almost anything

that may look frightful to him. If you wish to make a trial of this theory, just take a horse into the stable and let him examine the frightful objects a few minutes, after his own mode of examining things and you will be perfectly satisfied. There is a singular fact connected with taming the horse, that I would never have believed it if I had not tried it. If you accustom him to any particular object, by showing it to him on one side only, he will not be afraid when he sees it with the eye on that side, but he will be afraid if you approach him with it on the other side. It is therefore necessary to pacify him on both sides in all cases. After you have accustomed him to the umbrella, or whatever you may wish to make him familiar with on his right side, repeat the operation on the left side in the same manner, as if you had not approached him at all.

The Kind of Halter to Use, and how to Use it.

Never use a rope halter; the cords of the rope are hard, and appear to aggravate and excite distrust rather than confidence; but by all means procure a leather halter, made of bridle-leather, so it will feel soft and pliable to the touch, and to fit rather tightly on the head, so as not to feel uncomfortable. Before putting a halter on the colt, he must be rendered familiar with it, by caressing him and permitting him to examine the article with his nose, then place a portion of it over his head, occasionally giving it a slight pull, and in a few minutes he will be accustomed to these liberties, and then the halter may be fastened on properly. To teach him to lead, is another difficulty. Stand a little on one side, rub his nose and forehead, take hold of the strap and pull it gently, and the same time touch him lightly with a long whip across his hind legs. This will make him advance a step; repeat the operation several times, and he will soon learn to follow you by simply pulling the halter. The mouth of the colt should be frequently handled; after which, introduce a plain snaffle bit between his teeth and hold it there with one hand, while you caress him with the other.—After a time he will allow the bridle to be placed upon him, when the saddle may be brought in and rubbed against his nose, neck and legs. Next hang the stirrup strap across his back and gradually place the saddle in its proper position upon the horse. The first time the girth is buckled, it should be done so loosely as not to attract his attention—subsequently it can be tightened without inspiring him with fear, which if fastened immediately would most certainly do. In this manner the wildest colt can be effectually subjugated by such imperceptible degrees, that he gives tacit obedience, before he is aware of his altered condition.

To Break a Horse to Harness.

Take him into a tight stable, take the harness and go through the

same process as you would with the saddle, until you get him familiar with it, so you can put it on his back and rattle it around without his caring for them. As soon as he will bear them, put on the lines, caressing him as you draw them over him, and drive him about in the stable till he will bear them over his hips. The lines are a great aggravation to some colts, and often frighten them as much as if you were to raise a whip over them. As soon as he is familiar with the lines and harness, take him out and put him by the side of a gentle horse and go through the same process that you did with the blinds. When you are breaking a horse to harness, after fixing the lines, hitch the horse to a small log that he can draw very easy, with long traces, frequently turning him so that the traces will draw lightly against his legs, frequently stopping and petting him. Then hitch him to something heavier, and get behind him and drive him. By thus working with him you will make a strictly true horse of him. He also gets so that he is not afraid of the traces or harness, and then you can proceed to hitch him to a wagon. Persons should not drive fast at first. In first hitching a colt in harness he should be handled very careful. In handling colts in this way, you will have no trouble with them, but you will have a much better broke horse; and one that will be much safer for the family. A horse broken in this way, is not half so easily spoiled as one that is broken by any other process. In breaking horses to ride, they should be handled in very much the same way as I have spoken of. After bitting them sufficiently, you may proceed to saddle them; then ride them two or three miles at a time, very slowly, not far enough to tire them.

To Break Horses to Stand the Fire of a Gun.

You commence by administering the three articles first mentioned, in the nostrils; this will prevent his smelling the powder. Then load your pistol, but very light, so as to make the report as light as possible. Every time you fire give him a small piece of an apple with some powder on it at the same time rubbing and patting him on the head and neck. When you first commence firing stand close to the horse's shoulders, and rest your arm on his withers. After you have fired a sufficient number of times, mount the horse and shoot from his back. Keeping up this practice for a short time, the horse will get so that he will not care anything about the firing of a gun at any time or place.

Necessity of a Thorough Training.

The horse must be convinced, by repeated proofs of being overmatched, that resistance is useless; for, since his willingness and rebellion are based upon the limited reasoning of his experience, he must be thoroughly convinced by experience that unconditional submission is

the only alternative. This you cannot prove to the understanding of the horse without repeating your lessons until he submits unconditionally; but, as nursing and care is to the patient over the force of disease, so is the subjugation of the horse. His submission should be encouraged and rewarded by kindness and feeling from the hand, with little presents of such things as he likes. That master is supreme in his control, and submission to his commands becomes a pleasure, who has the power to enforce his will, but who exercises with the sweetening encouragement of love. While force is necessary and you have the means of making your horse almost a plaything in your hands, let the silken chord of love be the cement that fixes and secures this submission. A good natured, clever man, it is admitted, can teach a horse almost anything; and it has become a proverb, that "kindness will lead an elephant by a hair." Show your horse exactly what you want him to do, and endeavor to use the patience and reason in teaching and controling him you would believe necessary for yourself to understand, if placed in like circumstances, ignorant of the language and intentions of such a teacher, who even preserved his patience and refrained from abuse, what progress would you make as a pupil, gifted as you are, with all your intelligence? If possible, ennoble and elevate your feelings by realizing your responsibility to yourself, to the community, and to the noble animal committed to your charge. Make your horse a friend by kindness and good treatment. Be a kind master, and not a tyrant. Make your horse a willing servant and not a slave.

How to Proceed with a Colt after Haltering.

The first time you halter a colt, you should stand on the left side, pretty well back to his shoulder, taking hold of that part of the halter which goes around his neck. Then with your two hands about his neck, you can hold his head to you, and raise the halter on without making him dodge, as he would by putting your hands about his nose. You should have a long rope or strap ready, and as soon as you have the halter on attach this to it, so that you can let him walk the length of the stable without letting go the strap, or without making him pull on the halter; for, if you only let him feel the weight of your hand on the halter, and give him more rope when he runs from you, he will never rear, pull, or throw himself; yet you will be holding him all the time, and doing more towards gentling him, than if you had the power to snub him right up and hold him to one spot; because he knows nothing about his strength, and if you do not do anything to make him pull, he will never know what he can do in that way. In a few minutes you can begin to control him with the halter. Then shorten the distance between yourself and the horse, by taking up the strap in your hand. As soon a she will allow you to hold him by a tolerably short strap, and to step up to him without flying back, you can begin to give him

some idea about leading. But to do this, do not go before and attempt to pull him after you. but commence by pulling him very quietly to one side. He has nothing to brace either side of his neck, therefore will soon yield to a steady, gradual pull of the halter. As soon as you have pulled him a step or two to one side, step up and caress him, then pull him again; repeating this operation until you can pull him in any direction, and walk about the stable with him. This you can do in a few minutes, for he will soon think, when you have made him step to the right or left a few times, that he is compelled to follow the pull of the halter, not knowing that he has the power to resist your pulling.—Besides you have handled him so gently that he is not afraid of you, but rather likes you. After you have given him a few lessons of this kind at proper intervals, he will be so tame that if you turn him out to pasture he will come up to you to be caressed every oportunity he has. While training him in the stable you should lead him about some time before you take him out, opening the door so that he can see out, leading him up to it and back again, and then past it. See that there is nothing on the outside to make him jump when you lead him out, and as you go out with him try to make him go very slowly, catching hold of the halter close to the jaw with your left hand, while the right is resting on the top of his neck holding to his mane. Do not allow any one to be present, or in sight, during your operations, either in or outside the stable. If you are entirely alone, and manage your colt rightly, you will soon be able to lead and hold him as easily as you could a horse already broken.

Do not try to force the colt if excited. When excited, the colt is not in a condition to understand what you require of him, or to be submissive. You should also be careful not to train the colt so long that he will become heated and confused. But little should be required at a time, and hold to that point until you gain it thoroughly, before you undertake to do more. For example, in making a colt follow, if he submits ever so little, caress and reward him for it; so continue and you will have no trouble. When you resort to force, do it sharply, so as to impress him as much as possible with your power.

How to Proceed if a Colt is Stubborn.

If the animal you are operating upon, seems to be of stubborn or mulish disposition, rather than wild, if he lay back his ears as you approach him, or turn his heels to kick you, he has not that regard or fear of man that he should have to enable you to handle him quickly and easily; and it might do well to give him a few cuts with the whip about the legs, pretty close to the body. It will crack keen as it plies about the legs, and crack of the whip will effect him as much as the stroke. Besides one sharp cut about the legs will be of more effect than two or three over the back, the skin on the inner part of the legs

or about the flanks being thiner and more tender than on his back. Do not whip him much, only just enough to scare him. It is not to hurt the horse that we whip him ; we do it to scare a bad disposition out of him. But whatever you do, do quickly, sharply, and with a good deal of fire ; but always without anger. If you scare him at all, you must do it at once. Never go into a pitched battle with your horse, and whip him until he is mad, and will fight you. You had better not touch him at all ; for you will establish, instead of fear and reason, feelings of resentment, hatred and ill will. It will do him no good, but harm, to strike him, unless you frighten him. If you succeed in frightening him, you can whip him without making him mad, for fear and anger never exist together in the horse, and as soon as one is visible you will find the other has disappeared. As soon as you have frightened him so that he will stand up straight and pay some attention to you, approach him and caress him a good deal more than you whipped him ; thus you will excite the two controling passions of his nature, love and fear. He will love you and fear you too, and as soon as he learns what you require, he will obey quickly. If the colt if is of too mulish a disposition to yield to careful and gentle treatment, you must resort to the several measures recommended for taming vicious horses.

To Make a Colt Follow Under the Whip.

After the colt comes around to you readily by pulling a little on the halter, and follows freely, take your whip in the right hand, pull upon the halter a little saying "come here, sir," and at the same time tap lightly with the whip over the hips; he will come to you mainly because you have taught him to yield to a slight pull upon the head, and will come to you at this signal, because he wishes to get away from the touch of the whip behind. As soon as he comes to you carress him and feed from your hand with something he likes. Repeat this, each time pulling upon the halter until he will come to you as readily by tapping with the whip as he did at first to the halter. Now instead of hitting him with the whip, commence by snapping it behind him ; if he come, caress and encourage him as before, and so repeat ; at each time increasing the distance from him, until he will follow or come to you quickly by cracking the whip. A few lessons of the foregoing kind will make him run after you when he sees the motion of the whip. In twenty or thirty minutes he will follow you around the stable. After you have given him two or three lessons in the stable, take him in a small lot and train him ; and from thence you can take him into the road and make him follow you anywhere and run after you like a dog.

How to Make a Horse Stand Without Hitching.

After you have well broken him to follow you, stand him in the

centre of the stable, begin at his head to caress him, and gradually work backwards; if he moves give him a cut with the whip and put him back to the same spot from where he started. If he stands, caress him as before, and continue gentling him in this way until you can get around him without making him move. Keep walking around him, increasing your pace, and only touch him occasionly. Enlarge your circle as you walk around, if he then moves give him another cut of a whip, and put him back to his place and begin anew. If he stand, go to him frequently and caress him, and then walk around him again. Don't keep him in one position too long at a time, but make him come to you occasionally and follow you around the stable; then stand him in another place and proceed as before. You should not train your horse more than an hour at a time.

How to Lead a Colt with a Broken Horse.

If you want to lead your colt by the side of another horse, you must first put the horse into the stable with the colt. You first attach a second strap to the colt's halter, and lead your horse up along side of him; then get on the broken horse and take one strap around his breast, under the martingales, if he has one on, holding it in your left hand. This will prevent the colt from getting back too far, besides you have more power to hold him with the strap pulling against the horse's breast. The other strap take up in your right hand to prevent him from running ahead, then turn him about in the stable, and if the door is wide enough, ride out with him in that position. If not, take the broke horse out first, and stand his breast up against the door; then lead the colt to the same spot, and take the straps as before directed, one on each side of his neck, and then let some one start the colt, and as he comes out turn your horse to the left and you will have them right. You can manage any kind of a colt in this way without trouble; for if he tries to run ahead, or pull back, the two straps will bring the two horses facing each other, so that you can very easily follow up his movements without doing much holding, and as soon as he stops running backwards you are right with him and all ready to go ahead. If he gets stubborn and does not want to go, you can remove all his stubbornness by riding your horse against his neck, thus compelling him to turn to the right, and as soon as you have turned him about a few times he will be willing to go along. The next thing, after you are through leading him, will be to take him into a stable and hitch him in such a way as not to have him pull on the halter.

How to get a Colt into a Stable.

You should lead a broken horse into the stable first, and get the colt, if you can, to follow in after him. If he refuse to go, step up to

him, taking a little switch in your right hand; then take hold of the halter close to his head with the left hand, at the same time reaching over his back with your right arm so that you can tap him on the opposite side with your switch. Bring him up facing the door, tap him slightly with your switch, reaching as far back as possible. This tapping, by being pretty well back, and on the opposite side, will drive him ahead and keep him close to you. Then by giving him the right direction with your left hand, you can walk into the stable with him. I have walked colts into the stable in less than a minute, after men had worked at them over half an hour trying to pull them in. If you can not walk him in at once in this way, turn him about and walk him around awhile until you can get him up to the door without pulling at him; then let him stand a few minutes, keeping his head in the right direction with the halter, and he will soon walk in of his own accord. Never attempt to pull a colt into the stable. That would make him think at once that it was a dangerous place; and if he was not afraid of it before, he would be then; besides, we do not want him to know anything about pulling on the halter. If you want to tie up a colt, put him in a tolerably wide stall, which should not be too long, and should be connected by a bar or rope to a partition, so that after the colt is in he cannot go far enough back to pull on the halter; then by tying in the center of the stall, it would be impossible for him to pull on the halter, the partition behind preventing him from pulling back, the halter checking him every time he turns to the right or left. In a stall of this kind you can break any horse to stand tied with a light strap anywhere without his ever knowing anything about pulling, for if you have broken your horse to lead and have taught him the use of the halter, which you always should do before you hitch him to anything, you can hitch him in any kind of a stall; and if you give him something to eat, to keep him up to his place for a few minutes at first, there is not one in one hundred that will pull at the halter or ever attempt to do so.—This is an important feature in breaking the colt, for if he is allowed to pull on the halter at all, and particularly if he finds that he can break the halter, he will never be safe. The most powerful means of learning a colt to lead is by the use of what is designated as the "Eureka Bridle."

How to Make a Eureka Bridle.

Take a cotton cord, or fine yarn, such as is sometimes used for bed cords, or clothes lines, usually about three-eighths of an inch thick. If you cannot get cotton cord, hemp or anything of that kind that is strong enough, will answer the purpose.

Let it be about fifteen feet long. Tie one end into a hard knot, just as you would to prevent its raveling. Tie another knot about a foot from the one in the end. But before you draw it tight, put the knot on the

end through ; you have now a loop that will not slip, made on the same principle that a rope is tied around the neck of a horse to hitch with, so as not to tighten upon the neck by pulling on it. This loop should be just large enough to slip over the under jaw of the horse you wish to train. Put this loop over the lower jaw ; then while standing on the near side, take the cord in the left hand and bring it over the neck by passing the left hand under the neck to the opposite side towards the mane ; bring the right hand over the neck and take the cord from the left and pass back to the loop and put through from the top side, until the part over the neck is drawn down like a check rein. Now take hold of the end of the rein and you will find you have a means of power in it that makes the strongest horse almost a plaything in your hands. The objection to the use of this bridle in the training of the innocent colt is, that the ignorant are inconsiderate in its use instead of using it with the utmost kindness, a little resistance on the part of the colt is made an excuse to use it the most severe manner, until the colt either submits unconditionally, or becomes so desperate with pain as to become entirely reckless and regardless of the utmost efforts. When your horse resists too much, you will always find it to your advantage to put him away for a short time until he becomes cool. In fact, the great secret of training is in not training too long, and repeating. If you intend using the Eureka Bridle as a means of subduing your colt, put it on after you hamper him, on three legs with the strap over the back. As soon as he submits cleverly to this step, instead of fastening up the leg as by the method already described, take off your strap ; then put on the bridle gently. Step to one side, and back, and say "come here, sir," pulling a very little upon the bridle, just enough to bring his head towards you a little. Now step up to him and pat him on the neck, and say, "you are a fine fellow," then try again in the same way, and so repeat until he will come to you quite freely. You may increase your force upon the bridle in proportion to his submission, but not if he shows stubbornness. You may then step to the other side and repeat the lesson until he will come to you either way cheerfully. If you wish him to follow you, continue your training in this way, gradually pulling a little on a line with his body, until he will follow you as well ahead, as he does sidewise.

How to Break a Horse to Ride.

If a colt, you must first supple the muscles of his back, before permitting much weight to be carried. You must keep in mind that he is not accustomed to carry weight and to put one hundred and fifty on, would be entirely wrong. You must make the colt understand that you are his friend. It will require but a few days to supple the muscels of the neck and back, then you have a horse that will guide easily. After the first three days the horse will carry one hundred and twenty five pounds easier than at first he would twenty. You will now fasten

the saddle on, but not too far forward. Buckle the girths tight, and let him remain about ten minutes; then approach him gently, pat him on the neck, and draw up the reins tight with the left hand to the withers; then pat him gently on the back and rump, speaking very low during the time; then rise gently, throwing the right leg over the saddle and sit perfectly still for a few moments, then dismount and caress him, patting his head and back. After doing so a few times he will be as submissive as a lamb.

Handling the Feet of a Horse.

Should the colt refuse to have his feet handled, he may be made to submit by reproving with the bridle, and putting a small strap on the hind foot; then pull on this strap and pull the foot up. At the moment he kicks, bring down on the mouth sharply with the bridle; in a short time he will submit to your control unconditionally. The same principle applies to this under all circumstances. It is a means of reproof, and certainly has a powerful effect upon the horse.

How to teach a Horse to Pace.

First, take nine or ten pounds of lead, divide into four parts, equal to three and three-quarters by four and a half inches in size; make two holes in each end of these leads, then fasten two together and have them padded. Then fasten them on the horses leg's, one on each hind leg just above the ankle joint. Ride your horse briskly with these weights upon his ankles, at the same time pulling each rein of the bridle alternately. By this means you immediately throw him into a pace. After you have in this way trained him, to some extent, change your leaden weights to something lighter; leather paddings or something equal to it will answer the purpose. Let him wear these weights until he is perfectly trained. By adopting this plan you will speedily make a smooth and easy pacer of any horse.

Management of Wild Horses.

Cause your horse or colt to be put in a small yard or stable. If in a stable, it ought to be large in order to give him some exercise with the halter. Before you lead him out, if the horse belongs to that class that only appears to fear man, you must introduce yourself gently into the stable or yard where the horse is. He will naturally run from you and frequently turn his head toward you, but you must walk about extremely slow and softly, so that he can see you whenever he turns his head towards you, which he never fails to do. In a short time, in a quarter or half an hour, (I never knew one to be much longer without turning his head towards me) at the very moment he turns his head,

hold out your left hand towards him, and stand perfectly still; keeping your eyes upon the horse, watching his motions, if he makes any. If the horse does not stir in the course of fifteen minutes, advance as slowly as possible, and without making the least noise, always holding out your left hand. If the horse makes the least motion when you advance towards him, stop, and remain perfectly still until he is quiet; remain a few moments, and then advance again in the same slow and almost imperceptible manner. If the horse then stirs again, stop without changing your position. It is very uncommon for the horse to stir more than once after you begin to advance, yet there are some exceptions. He generally keeps his eyes steadfast upon you until you get near enough to touch him on the forehead. When you are thus near to him, raise your hand slowly, and by degrees, and let it come in contact with that part just above the nostrils, if possible. If the horse flinches, (as many will,) repeat with great rapidity, those light strokes upon the forehead, going a little farther up towards his ears by degrees, and descending with the same rapidity until he will let you handle his forehead all over. Now let the strokes be repeated with more force over all his forehead, descending by lighter strokes to each side of his head, until you can handle that part with equal facility; then touch in the same light manner, making your hand fingers play around the lower part of the horse's ears, coming down now and then to his forehead, which may be looked upon as the helm that governs all the rest. Having succeeded in handling his ears, advance towards the neck with the same precautions, and in the same manner, observing always to augment the force of the strokes whenever the horse will permit it. Perform the same on both sides of the neck, until he lets you take it in your arms without flinching. Proceed in the same progressive manner to the sides, and then to the back of the horse. Every time the horse shows any nervousness, return immediately to the forehead, as the true standard, patting him with your hands, and thence rapidly to where you had already arrived, always gaining ground a considerable distance farther on, every time this happens. The head, ears, neck, and body, being thus gentled, proceed from the back to the roots of the tail. This must be managed with dexterity, as a horse is never to be depended on that is skittish about the tail. Let your hand fall lightly and rapidly on that part next to the body a minute or two, and then you will begin to give it a slight pull upwards, every third or fourth stroke, at the same time you continue this handling of him, augment the force of the strokes, as well as raising the tail, until you can raise it and handle it with the greatest of ease, which commonly happens in a quarter of an hour with most horses; in others, almost immediately, and in some much longer. It now remains to handle all his legs. From the tail come back again to the head, handle it well, as likewise the ears, breast, and neck, speaking now and then to the horse, but very low. Begin by degrees to descend to the legs, always ascending and descending, gaining ground every

time you descend, until you get to his feet. Talk to the horse while you are thus taming him. Let him hear the sound of your voice, which at the beginning of the operation will not be so necessary, but which I have always done in handling horse's feet. "Hold up your foot," you will say, at the same time lifting up his foot with your hand. He soon becomes familiar with the sounds, and will hold up his foot at command. Then proceed to the hind, and go on in the same manner; and in a short time the horse will let you litt them and even take them up in your arms. All this operation is no magnetism, nor galvanism. It is merely taking away the fear the horse generally has of the man, and familiarizing the animal with his master. As the horse doubtless experiences a certain pleasure from this handling, he will soon become gentle under it, and show a very marked attachment to his keeper.

The Kind of Bit to Use, and How to Use it.

To accustom a colt to the bit, you should use a large smooth snaffle, so as not to hurt his mouth, with a bar at each side to prevent it from pulling through either ways. This should be attached to the headstall of your bridle, and put onto your colt, with out any reins to it, and let him run loose in a large stable or shed, some time, until he become a little used to the bit and will bear it without trying to get it out of his mouth. Repeat this several times before you do anything more with colt, and as soon as he will bear the bit, attach a single rein to it without any martingale. You should also have a halter on him, or a bridle made after the fashion of a halter, with a strap to it, so that you can hold or lead him about without pulling much on the bit. Ignorant farmers will put a bitting harness on the colt the first thing they do, buckling it on as tight as they can draw it,, to make him carry his head, and then turn him out into a lot to run half a day at a time. This is one of the very worst punishments they can inflict on a colt, and is very injurious to a young horse that has been used to running in pasture, with his head down. I have seen colts so injured in this way, that they never got over it, and the same men could not plead ignorance for I told them better, but they were of the class of men who always know more than any one else. A horse should be well accustomed to the bit before putting on the bitting harness, and when you first bit him you should only rein his head up even with his body, let that point be high enough, and he will soon learn that he cannot lower his head and that raising it a little will loosen the bit in his mouth; this will give him an idea of raising his head to loosen the bit and then you can draw the bit a little tighter every time that you put it on, and he will raise his head to loosen it. By this means you will gradually get his head and neck in the position you want him to carry it and give him a nice and graceful carriage without hurting him, making him mad or causing his mouth to get sore. Horses that have their head drawn up tightly should not have the bitting on more than fifteen minutes at a time.

How to Make a Bitting Bridle for an Unruly Horse.

Take the Eureka Bridle already described, and fix a loop upon the other end just like that already used to put around the jaw, but large enough to go over the head and fit over the neck rather tight where the collar is worn; now bring your cord forward, put it through the mouth from the off side and bring back on the near side and put through the loop around the neck, pull upon this cord and the head will be drawn back to the breast; you are now prepared to bit; simply pull upon the cord a little tighter and so repeat for five or ten minutes, then stop bitting and repeat at some future time until you have the horse entirely under your control.

How to Saddle a Colt.

Any one man who has this theory can put a saddle on the wildest horse that ever grew, without any help and without scaring him. The first thing will be to tie each stirrup strap into a loose not to make them short and to prevent the stirrup from playing about and hitting him; then double up the skirts and take the saddle on your right arm so as not to frighten him, rub him gently a few times with your hand, then raise the saddle very slowly until he can see it, smell it and feel it with his nose, then let the skirts loose and rub it very gently against his neck the way the hair lays, letting him hear the rattle of the skirts as he feels them against him, each time a little further backward, and finally slip it over onto his back, shake it a little with your hands, and in less than five minutes you can rattle it about over his back as much as you please, and pull it off and throw it on again without his paying much attention to it. As soon as you have accustomed him to the saddle, fasten the girth. Be careful how you do this, for it often frightens the colt when he feels the girth binding him and making the saddle fit tight on his back. You should bring up the girth very gently and not draw it too tight at first, just enough to hold the saddle on, move him a little and girth as tight as you please and he will not mind it. You should see that the pad of your saddle is all right before you put it on, and that there is nothing to make it hurt him or feel unpleasant to his back. It should not have any loose straps on the back part of it to flap about and scare him. After you have saddled him in this way, take a switch in your right hand to tap him up with, walk around in the stable a few times with your right hand over the saddle, taking hold of the ring on each side of his neck with your right and left hands, thus marching him about the stable until you teach him the use of the bridle and can turn him about in any direction and stop him by a gentle pull on the rein; always caressing him, and loosening the reins a little every time you stop him. You should always be alone and have your colt in some light stable or shed the first time you ride him. The loft should be high so that you can sit on his back without endangering your head.

You can teach him more in two hours' time in a stable of this kind than you could in two weeks in the usual way of breaking colts out in an open place. If you follow my course of treatment you need not run any risk or have any trouble in riding the worst kind of a horse. You take him a step at a time until you get up a mutual confidence and trust between yourself and horse. First teach him to lead and stand hitched; next acquaint him with the saddle and the use of the bit, and then all that remains is to get on him without scaring him, and you can ride him as well as any horse.

How to Mount a Colt.

First gentle him well on both sides about the saddle and all over, until he will stand still without holding and is not afraid to see you anywhere about him. As soon as you have done this get a small block about one foot in height and set it down beside him, about where you want to stand to mount him. Step up on this, raising yourself gently. Horses notice every change of position very closely and if you were to step up suddenly on the block it would be very apt to scare him, but by raising yourself gradually on it he will see you without being frightened, in a position very nearly the same as when you are on his back. As soon as he will bear this without alarm, untie the stirrup strap next to you and put your left foot in the stirrup and stand square over it, holding your knee against the horse and your toe out so as to touch him under the fore shoulder with the toe of your boot. Place your right hand on the front of the saddle and on the opposite side of you, taking hold of a portion of the mane and reins, they hang loosely over his neck, with your left hand; then gradually bear your weight on the stirrup and on your right hand until the horse feels your whole weight on the stirrup. Repeat this several times, each time raising yourself a little higher from the block until he will allow you to put your leg over his croop and place yourself in the saddle. Another, and in some cases, a better way of mounting, is to press the palm of your hand on the off side of the saddle and as you raise lean your weight upon it. By this means you can mount with the girths loose or without any girths at all. There are three great advantages in having a block to mount from: first, a sudden change of position is very apt to frighten a young horse that has never been handled. He will allow you to walk to him and stand by his side without scaring at you, because you have gentled him in that position; but if you get down on your hands and knees and crawl towards him he will be very much frightened, and upon the same principle he would frighten at your new position if you had the power to hold yourself over his back without touching him. Then the first great advantage of the block is to gradually gentle him to that new position in which he will see you when you ride him. Secondly, by the process of holding your weight in the stirrup and on your hand you can grad-

ually accustom him to your weight so as not to frighten him by feeling it all at once. In the third place, the block elevates you so that you will not have to make a spring in order to get on the horse's back, but from it you can gradually raise yourself into the saddle. When you take these precautions, there is no horse so wild but that you can mount him without making him jump. I have tried it on the worst horses that I could find in the country, and have never failed in any case. When mounting, your horse should always stand without being held. A horse is never well broke when he has to be held with a tight rein when mounting, and a colt is never so safe to mount as when you see that assurance of confidence and absence of fear which cause him to stand without holding.

How to Ride a Colt.

When you want a colt to start do not touch him on the side with your heel or do any thing to frighten or make him jump at once. Speak to him kindly and if he does not start pull him a little to the left until he does so. Then let him walk off slowly with the reins loose. Walk him around in the stable a few times until he gets used to the bit and you can turn him about in every direction and stop him as you please. It will be well to get off and on a good many times until he is perfectly used to it before you take him out of the stable. After you have trained him in this way, which should not take more than two or three hours, you can ride him anywhere you choose without ever having him jump or make any effort to throw you. When you first take him out of the stable be very gentle with him as he will feel more at liberty to jump or run and be easier frightened than when he was in the stable, but you will nevertheless find him pretty well broke and will be able to manage him without much trouble or danger. When you mount a colt take a little the shortest hold on the left rein so that if any thing frightens him you can prevent him from jumping by pulling his head around to you. This operation of pulling the horse's head around against his side will prevent him from jumping ahead, rearing up or running away. If he is stubborn and will not go, you can make him move by pulling his head around to one side and keeping it there till he does move. When whipping would have no effect, turning him around a few times will make him dizzy and then by letting him have his head straight and giving him a little touch with the whip he will go along without any trouble. Never use martingales on a colt. When you first ride him every movement of the hand should be right to the bit in the direction in which it is applied to the reins, without a martingale to change the direction of the force applied. You can guide the colt much better without it and teach him the use of the bit in much less time, besides martingales would prevent you from pulling his head round if he should jump. After your colt has been ridden until he is gentle and well accustomed to

the bit you may find it an advantage if he carries his head to high or his nose too far out to put martingales on him. You should be careful not to ride your colt so far as to heat, worry or tire him; get off as soon as you see he is a little fatigued, gentle him and let him rest. This will make him kind to you and prevent his getting stubborn or mad.

Foot Strap, and How to use it.

Take a common strap or rope about the size of the Eureka Bridle, the bridle will do by untying one of the loops, fasten the end untied carefully to the fore foot below the fetterlock, pass the other end over the belly-band of the harness and carry it back to the left side to the sulky, over the holdback strap of the breeching, and hold it as a third rein in your hand. You have in this strap or cord connected with the foot in this way, a means of control, with which you can almost as easily as if a plaything, control a horse while moving in the harness, and embodies one of the most valuable and effective means of controling a horse in harness yet demonstrated. If the horse attempts to run away, simply pulling upon your strap throws him instantly upon three legs, and he has to stop; if he attempts to kick, the same remedy stops him; if he attempts to kick you, attract his attention forward instantly and at the same time make it impossible for him to kick.

How to Prevent a Horse from Running Away.

Put on the foot strap and when he attempts to run take up his foot, make him run, tripping him every time he will not stop at the word "whoa." Should he be of an extremely willful character he may run on three legs. If you mistrust so, attach another strap to the opposite foot; then make him run and if he will not run for the taking up of the second, which will destroy his confidence at once, when one strap will answer just as well. Make your lessons thorough so the horse will stop every time at the word "whoa". Although I have given a powerful means or coercion and of impressing the horse of his inability to resist the will of man, still, practical and thorough as are these means, they are of but little account if not used with prudence and judgment.

How to Make a Horse Lie Down.

Everything we desire to teach a horse must be commenced in such a way as to give him an idea of what we want him to do, and then be repeated until he learns it perfectly. To make a horse lie down bend his left fore leg and slip a loop over it so that he cannot let it down; then put a surcingle around his body and fasten one end of a long strap around the other fore leg just above the hoof; place the other end of the strap under the surcingle so as to keep the strap in the right direc-

tion. Take a short hold of it with your right hand, stand on the left side of the horse, grasp the bit in your left hand, pull steadily on the strap with your right, bear against his shoulder till you cause him to move; as soon as he lifts his weight your pulling will raise the other foot and he will have to come on his knees. Keep the strap tight in your hand so that he cannot straighten his leg; if he raises up hold him in this position and turn his head towards you; bear against his side with your shoulder, not hard, but with a steady, equal pressure, and in about ten minutes he will lie down. As soon as he lies down he will be completely conquered and you can handle him as you please. Take off the straps and straighten out his legs; rub him slightly about the face and neck the way the hair lies; handle all his legs and after he has laid ten or twenty minutes let him get up again. After resting him a short time make him lie down as before. Repeat the operation three or four times which will be sufficient for one lesson. Give him two lessons a day and when you have trained him three days in this way he will lie down by taking hold of one foot. As soon as he is well broken to lie down in this way, tap him on the opposite leg with a stick when you take hold of his foot, and in a few days he will lie down at the mere motion of the stick.

Kicking in the Stall.

To cure a horse of this habit, put on the saddle part of a harness and buckle it on tightly; then take a short strap with a ring attached and buckle it around the forward foot below the fetterlock; to this short strap attach another strap which bring up and pass through the turret, then return to the foot and run through the ring in the short strap; then pass over the belly-band and tie to the hind leg below the fetterlock. With this attachment on each side, the moment the horse kicks he pulls his feet from under him and trips himself upon his knees which he will be very careful not to do but a few times.

How to Tame a Horse with Vicious Habits.

Having given full instruction relative to a system of dealing with young colts I will now proceed to detail the plan of operation for taming and subduing wild or vicious horses. The principles of this method are the same as those in the management of colts.—kindness and gentleness—but the practice differs. When you desire to subdue a horse that is very wild or has a vicious disposition take up one fore foot and bend his knee till his hoof is bottom upwards and nearly touching his body; then slip a loop over his knee and shove it up till it comes above the pastern joint to keep it up, being careful to draw the loop together between the hoof and pastern joint with a second strap to prevent the loop slipping down and coming off. This will leave the horse standing on three legs. You can now handle him as you wish for it is utterly

impossible for him to kick in this position. There is something in this operation of taking up one foot that conquers a horse quicker and better than anything else that you do to him,and there is no process in the world equal to it in breaking a kicking horse, for in conquering one member you conquer to a great extent the whole horse. You can do anything you wish with the horse in this condition, as when he becomes convinced of his incapacity to cope with man he will abandon all antagonistic demonstration and become willing to obey and be generally docile. Operate on your horse in this manner as often as the occasion requires and you will soon find him as gentle as his nature will permit him to be. By these means the most vicious, uneasy, unruly or fretful horse may be cured, though it depends upon the age and disposition of the horse, how long it will take to make him amiable. When you first fasten up a horse's foot he will sometimes get very mad and strike with his knee and try every possible way to get it down, but as he cannot do that he will soon give up. Conquering a horse in this manner is better than anything else you could do, and leaves him without any possible danger of hurting himself or you either, for after you have tied up his foot you can sit down and look at him till he gives up. When you find he is conquered go to him, let down his foot, rub his leg with your hand, caress him and let him rest a few minutes; then put it up again. Repeat this a few times, always putting up the same foot, and he will soon learn to travel on three legs, so that you can drive him some distance. As soon as he gets a little used to this way of traveling, put on your harness and hitch him to a sulky. If he is the worse kicking horse that ever raised a foot, you need not be afraid of his doing any damage while he has one foot up, for he cannot kick, neither can he run fast enough to do any harm; and if he is the wildest horse that ever had a harness on, and had run away every time he has been harnessed, you can now hitch him to a sulky and drive him as you please. You can let him have the lines and whip too, with perfect safety, for he can go at but a slow gait on three legs, and will soon be tired and ready to stop. Only hold him enough to guide him in the right direction and he will soon be tired and willing to stop at the word. Thus you will effectually cure him at once of any further notion of running off. Kicking horses have always been the dread of everybody. You always hear men say when they speak about a bad horse, "I don't care what he does so he don't kick." This new mode is an effectual cure for that worst of all habits. There are plenty of ways by which you can hitch a kicking horse and force him to go, though he kicks all the time, but this does not have any good effect towards breaking him, for we know that horses kick because they are afraid of what is behind them; and when they kick against it and it hurts them they will kick the harder, and this will hurt them still more and make them remember the scrape much longer, and make it more difficult to persuade them to have any confidence in anything dragging behind them ever after; but by this new

method you can harness them to a rattling sulky, plow, wagon or anything else in its worst shape; they may be frightened at first, but cannot kick or do anything to hurt themselves, and will soon find that you do not intend to hurt them. and they will not care anything more about it. You can then let down the leg and drive along gently without any farther trouble. By this process a bad kicking horse can be learned to go gentle in harness in a few hours' time.

How to Cure Bad Kickers.

For extremely bad kickers, or horses hard to shoe, the following method will be found the most effectual: Put on a common rope or strap halter with a hitching rope or strap about twice as long as the horse's body. Have around the body a common surcingle, then pass the rope or strap between the fore legs, over the surcingle, back around the hind feet, below the fetterlocks, and forward over the surcingle, between the legs and tie short into the halter beneath the jaw. Now make him kick, and you will find that he reproves himself in the most severe manner, and in a short time will submit unconditionally. Care should be taken against chafing the foot by the action of the rope or strap around the fetterlocks. If you can attach a little strap around each foot with rings in them, through which run the strap or rope from the head instead of around the feet. Horses extremely bad about kicking when handled about the feet, or in being shod, yield readily to this mode of treatment. After a horse has submitted he should always be caressed and treated in a kind and gentle manner. For driving in harness attach to a common halter headstall a strap about six feet long, over which put a two inch ring, then tie the strap into the halter; now pass this double strap down between the fore legs so that the ring will extend just back of the belly-band; then buckle around each hind foot below the feterlock short straps with rings attached; to these rings attach a rope which is passed through the ring in the halter, just enough to enable the horse to stand naturally. In this condition it will be seen that the horse has sufficient freedom to walk and trot, but the moment he attempts to kick he reproves himself by the attachment to the head.

How to Hitch a Horse to a Sulky.

Lead the horse to and around the sulky, let him look at it, touch it with his nose and stand by it until he does not care anything about it, then pull the shafts a little to the left and stand the horse in front of the off wheel; let some one stand on the right side of the horse and hold him by the bit while you stand on the left side facing the sulky. This will keep him straight; run your hand back and rest it upon his hip and lay hold of the shafts with your right, bringing them up very gently to the left hand, which remains stationary. Do not let anything

but your arm touch his back, and as soon as you have the shafts directly over him let the person on the opposite side take hold of one of them and lower them very gently to the shaft bearers. Be very slow and deliberate about hitching; the longer time you take the better, as a general thing. When you have the shafts placed, shake them slightly so that he will feel them against his sides. As soon as he will bear them without scaring, fasten your traces, etc., and start him slowly; let one man lead him to keep him quiet while the other gradually works back with the lines until he can get behind and drive him. After you have driven him a short distance in this way you can get into the sulky and all will go right. It is very important to have your horse go gentle when you first hitch him up. After you have walked him awhile there is not half so much danger of his scaring. Men do very wrong in jumping up behind a horse to drive him as soon as they have him hitched. There are too many things for him to comprehend at once. The shafts, the lines, the harness, and the rattling of the sulky all tend to scare him, and he must be made familiar with them by degrees. If your horse is very wild I would advise you to put up one foot the first time you drive him.

How to train Horses for the Chaise.

It will not require a very vivid imagination for those that use the chaise much, to know that there is a great difference in the motion of the chaise, and what makes the difference is the gait of the horses, and those who would purchase a good chaise horse must purchase a short gaited one. A long gaited horse gives an unpleasant motion to the chaise. Now any horse of good action will make a good chaise horse, if you shorten his gait. To do this, you must use a net, this being like a breast collar; it must be two feet and a half long; it must now be attached to the collar and harness and worn long, reaching the knees. The cords in the fringe to this must be about four inches apart, and on each cord there must be four balls an inch and a half in diameter.—There must be a similar net on the breeching, reaching around the flank and meeting the one in front; this net must hang below the gambrils; then use a string of smaller balls on the fore feet of one inch in diameter—they will effectually shorten the gait. You should be careful in the first exercise after the putting on of the net. Drive or lead the horse around after the harness and net are on before putting him in the chaise. After a short time he can be hitched in and driven, but not fast, until his gait is confirmed. After a few days practice you will have a fine chaise horse. Some of the best chaise horses become so from having sore feet which make them step short. If you will attend to the remarks I make on shoeing and take care of the feet otherwise your horse will never have contracted feet.

To Train a Horse to stand when you are getting into a Carriage.

There are many horses that are very gentle after starting, but who will not stand to let more than one get in; they will then rear up and start very suddenly, and if stopped they become stubborn and refuse to start when called on. People then usually punish them with the whip or by kicking them, sometimes in the belly, which is very dangerous, as they have thus been ruptured. Now with such a horse as this you should commence in this way: after he is hitched, caress him about the head, then take hold of the reins and put your foot upon the step and shake the carriage; if he starts, pull gradually on the reins, and at the same time speak low, "whoa, my boy," or something like it; then approach his head and give him a piece of apple, carress him on the head between the eyes and on the nose and neck. Continue this kind of treatment a few minutes, and when you get in don't allow him to start off in a hurry—walk him off. After after a few repetitions of this exercise he will be perfectly submissive.

Halter Pulling.

It is a very easy matter to break up this bad habit. Put on the Eureka Bridle and train the horse until he will come to you readily when you pull upon him a little sideways. Simply repeat this gradually, a little more in a line with his body at each repetition, until he will yield as readily at being pulled forward as sideways; then put on a surcingle around his body; now lead the horse to a manger or post; run the halter strap through the ring or hole and pass it back between the fore legs, over the surcingle, and tie to the hind leg below the fetterlock. If your halter strap is not long enough splice a piece to it. Your horse so fastened, step forward to his head and make him pull. Of course he will go back with a rush, but the moment he attempts going back, the halter strap pulls directly upon the hind leg, which not only disconcerts him but makes it impossible for him to pull. The most halter pullers will not pull over two or three times when so hitched, but success in this, as well as all other cases, depends much on the prudence and good judgment used in managing the case.

How to Manage Balky Horses.

Horses know nothing about balking until they are forced into it by bad management. When a horse balks in harness it is generally from some mismanagement, excitement, confusion, or from not knowing how to pull, but seldom from any unwillingness to perform all that he understands. High spirited, free going horses are the most subject to balking, and only so because drivers do not properly understand how to manage this kind. A free horse in a team may be so anxious to go

that when he hears the word he will start with a jump, which will not move the load but give him so severe a jerk on the shoulders that he will fly back and stop the other horse. The teamster will continue his driving without any cessation and by the time he has the slow horse started again he will find that the free horse has made another jump and again flown back, and now he has them badly baulked and so confused that neither one of them knows what the matter is or how to start the load. Next will come the slashing and cracking of the whip and hallooing of the driver until something is broken or untill he is through with his course of treatment; but what a mistake the driver commits by whipping his horse for this act. Reason and common sense should teach him that the horse was willing and anxious to go, but did not know how to start the load; and should he whip him for that? if so, he should whip him for not knowing how to talk. A man that wants to act with reason should not fly into a passion, but should always think before he strikes. It takes a steady pressure against the collar to move a load, and you cannot expect him to act with a steady, determined purpose while you are whipping him. There is hardly one balking horse in five hundred that will pull from a whipping; it only adds fuel to the fire and will make him more liable to balk another time.—You always see horses that have been balked a few times turn their head and look back as soon as they are frustrated a little; this is because they have been whipped and are afraid of what is behind them. This is an invariable rule with balky horses, just as much as it is for them to look around at their sides when they have the bots. In either case they are deserving of the same sympathy and the same kind of rational treatment. When your horse balks or is a little excited, or if he wants to start quickly, or looks around and don't want to go, there is something wrong and he needs kind treatment immediately. Caress him kindly and if he don't understand at once what you want him to do he will not be so much excited as to jump and break things, and do everything wrong through fear. As long as you calm and keep down excitement of the horse there are ten chances to have him understand you where there would not be one under harsh treatment; and then the little flare-up would not carry with it any unfavorable recollections and he would soon forget all about it and learn to pull true. Almost every wrong act the horse commits is from mismanagement, fear, or excitement. One harsh word will so excite a nervous horse as to increase his pulse ten beats in a minute. Almost any team, when balked, will start kindly if you let them stand five or ten minutes as though there was nothing wrong and then speak to them with a steady voice and turn them a little to the right and left so as to get them in motion before they feel the pinch of the load. If you want to start a team that you are not driving yourself, that has been balked, fooled, and whipped for some time, go to them and hang the lines on the hames so that they will be perfectly loose, make the driver and spectators, if

there are any, stand at some distance on one side so as not to attract the attention of the horses, unloose the check rein so that they can get their heads down if they choose, let them stand a few minutes in this condition, until you can see that they are a little composed; while they are standing you should be about their heads gentling them. It makes them a little more kind and the spectators will think you are doing something that they do not understand, and will not learn the secret. When you have them ready to start stand before them, and as you seldom have but one balky horse in a team get as near in front of him as you can and if he is too fast for the other horse let his nose come against your breast; this will keep him steady, for he will go slow rather than run against you. Turn them gently to the right with the wagon, have it in a favorable position for starting, letting them pull on the traces as far as the tongue will let them go. Stop them with a kind word, gentle them a little and turn them back to the left by the same process. You will have them under your control by this time; as you turn them to the right steady them in the collar and you can take them where you please. There is a quicker process that will generally start a balky horse but not so sure: Stand him a little ahead so that his shoulder will be against the collar, then take up one of his fore feet in your hand and let the driver start them and he will go right along. If you want to break a horse from balking that has long been in the habit, you ought to set a day apart for that purpose; put him by the side of a steady horse, have check lines on them, tie up all the traces and straps so that there will be nothing to excite them; do not rein them up but let them them have their heads loose; walk them about together as slowly and lazily as possible; stop them and go up to the balky horse and gentle him, but keep him as quiet as possible. He will soon learn to start off at the word and stop whenever you tell him. As soon as he performs right hitch him to an empty wagon. It would be well to shorten the check chain behind the steady horse, so that if necessary he can take the weight of the wagon. The first time you start them do not drive but a few rods; watch your balky horse closely, and if you see that he is getting excited stop him before he stops of his own accord, caress him a little and start again. As soon as they will go well, drive them over a small hill a few times and then over a large one, occasionally adding a little load: this process will make any horse true to pull.

Advice to those who Drive Horses.

It will be to your interest, reader, to use all precaution to prevent a horse from becoming sick while in your hands. This can be done by adhering to certain rules which I will now note down: When you leave the stable drive slow for a few miles unless you know how much the horse has been fed. If he has just finished his meal it is very necessa-

ry that he should be driven at a moderate pace on the start. If he has eaten a few hours before this, precaution will be unnecessary. When you water your horse never give him more than two quarts and that once in two hours; look at his mouth and if it is moist with saliva he does not need watering, but if it should be dry and if tepid water is at hand wash out the nostrils and mouth with it; if not, use cold water. Warm water causes the saliva to exude, relieving the horse by keeping the mouth moist. If on a journey, stop at 11 A. M., and let your horse stand without any food for half or a whole hour, then give him one gallon of water and let him stand ten minutes, when he may be given three quarts of oats, five ears of good bright corn or three pints of shelled corn. After eating, let him stand two hours if you can, then you may put him into a brisk trot without any danger of causing disease. I should rather have a horse driven eight or nine miles an hour, treated in this way, than four if started off directly after eating. By watering after feeding and then driving off, gases are generated in the stomach and give colic or set the bot at work in the membrane of the stomach. Again, if the horse is warm when you stop, be careful not to stand him in a current of air, as he might take a disease that would carry him off. If in very warm weather he had better stand in the sun than in a draught of air. If in very cold weather, either stable him or clothe him when you stop, to keep the cold air from closing the pores of the skin. If you are compelled to stop in the wind always face it; then the air blows the way the hair lays. If in a northern climate, in the winter, never allow a snow ball to remain in the foot, especially if he has been driven fast and is warm; the coffin muscle is relaxed by heat and the close proximity of snow would cool off the foot so suddenly that the muscle would shrink to the contraction and make him lame. Always be cautious to keep the feet from cold water when the horse is warm, as any sudden contact of cold with hot blood, either in the body or legs, would be dangerous. These precautions should be taken either in riding or driving. If you drive through water when the horse is warm, give exercise enough to keep up the circulation, not to allow the blood to be chilled in the veins. If you adhere to these rules you will not be likely to have a horse injured by your management.

On Choking as a means of Subduing a Horse.

Choking is another method of conquering a skittish, subborn or refractory horse. It is to be resorted to in cases where the measures before described fail to produce the desired effect. The principles on which the plan of choking are based are that you must make a powerful appeal to the intelligence of the animal, by physical means, before you can subdue him. Now we must know that most animals in fighting sieze each other by the throat, and that a dog thus held by his antago-

nist for a few minutes, on being released is often so thoroughly cowed that no human artifice can induce him to again resume the unequal contest. It is then reasonable to suppose that choking will have a similar effect on the horse, when it can be done without injuring the animal. It is an easy mode of subduing him, for by its operation he becomes docile and will thereafter receive any instructions which he can be made to understand. Teaching the horse by this means to lie down at our bidding tends to keep him permanently gentle towards man, for it is a perpetual reminder of his subdued condition. It requires a deal of practice to tame a horse successfully by choking, also a nice judgment to know when he is choked sufficiently, as there is a bare possibility that he might get more than would be good for him. I should advise persons not perfectly familiar with the horse to resort rather to the strapping and throwing down process, unless the animal to be operated upon is so vicious and intractable that he cannot be cured by it.

How to make a Horse Perfectly Safe for Family Use.

For a family horse, we should select one with a full, prominent eye and a broad space between them; full forehead, ears straight and pointed. When in action the ears should be in motion, working back and forth, thus showing that he knows what is transpiring around him. He should have a long, thin neck and a full trumped nostril. A horse of these points is not apt to tire on the road, for they indicate good blood. By giving the animal to understand that we are his friend and protector, he will feel safe and have confidence in us. To assure him of this, we must caress him on the neck and head and talk softly to him; then if you have something that he is very fond of, by feeding him with it you gain his sympathy and confidence, and he will remember your kindness to him; to us this seems reasonable. So long as he is treated with kindness he will be kind and gentle himself to every one handling him. If he should frighten at any new object, by speaking gently "whoa my boy," several times over; it assures him at once that he is safe. When your horses are harnessed to the carriage and they wish to start before you are ready, do not jerk them or speak cross, but go to their heads and caress and soothe them, and when you get in draw the reins carefully and talk kindly to them and allow them to walk off slowly. In a few days, with such treatment, your horses will be perfectly tractable and gentle. A full horse is as sensitive as a well bred man, and you must not halloo to him as you might to a hog. This you may not believe but it is so. You must never use the whip except when the horse knows what you want him to do and will not do it, or is lazy and requires the lash to increase the speed. Adhere to these principles of kindness and you will not fail to have a well trained family horse.

On the Rearing of Colts.

If a fine colt is desired, we must breed to a fine, thorough-blooded

horse. The colt should not be allowed to shrink for the first two years; If the dam has not sufficient milk to keep him plump he must be fed on cow's milk. Feed him through the winter on dry oat meal and give cow's milk to drink. If a colt is allowed to shrink during the first two years he will never fill out again as full and plump; his fine points will be undeveloped. The colt should not be kept close to a stable but allowed to run in and out at pleasure. He should not be allowed to stand on a plank floor at all. In the spring, as soon as the grass is good he should be turned out to pasture.

Training Horses for Trotting.

The horse should be in good condition and driven moderately with walking. Exercise him every morning, about five miles. Before going into quarters give him a brush for one hundred yards at the top of his speed, and one or two miles of moderate driving, suficient to sweat him, then rub dry with rubbing rag. Light rubbing is the best, just enough to dry the hair; hard rubbing on the bones and cords, causes soreness. Rub the flesh and muscles well, to harden them when driving. To sweat, put on two thick woolen blankets and drive at full speed two miles, then turn down the hood and neck-cover and scrape the head and neck well, and rub dry; then cover dry, and continue the same over the whole body, rubbing lightly, and only enough to dry the hair, then put on nice dry covering and let him stand. Sweating often in this way will weaken. It should be done but seldom. Their food and drink should be of the purest kind; sift their oats free from all dust, and dust the hay. Give about a handfull at a feed, morning and noon, and about twice that at night; from twelve to sixteen quarts of oats per day would be a great plenty, twelve would be plenty for the majority of horses. Give one gallon of water in the morning, the same at noon. At night two gallons of water and a peck of oats, with treble quantity of hay. You should not exercise any horse on a full stomach, for then fast work hinders digestion. Grain lying undigested in the stomach generates a gas by fermentation, which sets the bots at work and produces colic. Indigestion is the cause of many diseases, and can be avoided by adhering to the directions for feeding, watering and driving, given in the first part of this book. If he is bound up, and you wish to physic, give bran mashes.

On Horse Blinds or Blinkers.

All my experience with, and observation of horses, proves clearly to me that blinkers should never be used, and that the sight of the horse for many reasons should not be interfered with in any way. Horses are only fearful of objects they do not understand or are not familliar with, and the eye is one of the principle mediums by which this understand-

ing and this familiarity are brought about. The horse, on account of his very amicable nature, can be made, in the course of time, to bear almost anything in any shape; but there is a quicker process to reach his intelligence than wearing it into him through his skin, and however wild and nervous a horse may be, he can be taught in a very short time to understand and not to fear any object however frightful in appearance. Horses can be broken in less time and better without blinkers, but horses that always have worn them will notice the sudden change, and must be treated carefully; the first drive after that they will drive better without the blinkers than with. I have proved it by my own experiments that a horse broken without blinkers can be driven past any omnibus, coach or carriage on a parallel line as close as it is possible for him to go without ever wavering or showing any disposition to dodge. I have not, in the last twelve years constantly handling horses, both wild and nervous, ever put blinkers on any of them, and in no case have they ever shied at passing objects. The horse's eye is the life and beauty of the animal as well as the index of his emotions; it tells the driver in the most impressive characters what the horse's feelings are. By it he can tell the first approach of fear in time to meet any difficulty. He can tell if he is happy or sad, hungry or weary.—The horse, too, when permitted to see, uses his eyes with great judgment. He sees with his eyes better than we do; he can measure distances with his eyes better than we can; and, if allowed free use of them, would often save himself by the quickness of his sight from collisions, when the driver would fail to do so by a timely pull of the reins. It would also save many accidents to pedestrians in the streets, as no horse will run over any person that he can see. Blinkers are rapidly going out of use in the United States, and I have not yet found a man who having once left them off, could be persuaded to put them on again. They are an unnecessary and injurious incumbrance to the horse, and in years hence will be a thing to be read of as one of the follies happily reformed in the nineteenth century.

Advice to those about to Purchase a Horse.

When about to purchase a horse, examine the eyes well; the best judges are sometimes deceived in the eyes; therefore you cannot be too careful. Clearness of the eyes is a sure indication of their goodness, but this is not all that should be tended to. The eyelids and eyebrows and all other parts must be considered; for many horses whose eyes appear clear and brilliant, go blind at seven or eight years of age. Therefore be careful to observe whether the parts between the eyelids be full or swelled, for these are indications that the eyes will not last. When the eyes are remarkably flat, or sunk within their orbits, it is a bad sign, also when they look dead and lifeless. The iris or circle that surrounds the sight of the eye should be distinct, and of a pale, varie-

gated cinnamon color. This is always a sure sign of a good age, and it adds beauty to the appearance of the animal. Next examine the teeth, as you would not wish to purchase an old horse, nor a very young horse for service. The feet should next be regarded, for a horse with bad feet is like a house with a weak foundation, and will do little service. The feet should be smooth and tough, of a middle size without wrinkles, and neither too hard and brittle, nor too soft. The heels should be firm, and not spongy and rotten; the frogs horny and dry; the soles somewhat hollow—somewhat like a tea saucer; such feet will never disappoint your expectations, and such only should be chosen. Particular regard should be had to the shoulders; they should not be too much loaded, for a horse with heavy shoulders can never move well, and on the other hand, one that has very thin shoulders and a narrow chest, though he may move briskly so long as he is sound, yet he is generally weak and easily lamed in the shoulders. A medium should therefore be chosen. The body or carcass should be neither too small nor too large. The back should be straight, or have only a moderate sinking below the withers, for when the back of a horse is low, or higher behind than before it is both very ugly and a sign of weakness. The back should also be of proper length. The ribs should be large, the flanks smooth and full, and the hind parts, or uppermost haunches, not higher than the shoulders. When the horse trots before you, observe if his haunches cover his fore knees. A horse with short hind quarters does not look well. The next thing to be regarded in a horse is his wind, which may be judged of by the motion of his flanks. A broken winded horse also pinches in his flanks with a very slow motion and drops them suddenly, which may be easily perceived. Many horses breathe thick that are not broken winded. Indeed, any horse will in foggy weather, or if foul fed without sufficient exercise. But if a horse has had good keeping and proper exercise, and yet has these symptoms, there is some defect, either natural or accidental, such as a narrow chest or some cold that has affected his lungs. There are other particulars that should be observed in choosing a horse. If his head be long and fleshy, and his neck thin and gross, he will always go heavy on the hand, and therefore such should never be chosen. A horse that has his hocks very wide seldom moves well, and one that has them too near will chafe and cut his legs by crossing them. Fleshy-legged horses are generally subject to the grease and other infirmities of that kind, and should not be chosen. The temper of a horse should be particularly attended to; avoid a fearful horse, which you may know at first sight by his starting, crouching, or creeping if you approach him. A hot and fretful horse is also to be avoided; but the buyer should be careful to distinguish between a hot, fretful horse, and one that is eager and craving. The former begins to fret the moment he is out of the stable, and continues in that humor till he has quite fatigued himself; and the latter only endeavors to be foremost in the field and is truly

valuable. He has those qualities that resemble prudence and courage; the other, those of intemperate heat and rashness. A horse that goes with his fore feet low is very apt to stumble; and there are some that go so near the ground that they stumble most on even roads; and the dealers to remedy this, put heavy shoes on their feet, for the heavier the shoes are, the higher he will lift his feet. Care also should be taken that the horse does not cut one leg with the other. A horse that goes near the ground will cut the low side of the fetlock joint; but one that goes high cuts below the knee, which is called the speedy cut. A horse that lifts his feet high generally trots fast, but is not the easiest for the rider. Some horses cut with the spurn of the foot, and some with the heel, but this you may soon perceive by their standing; for if a horse points the front of his foot inward, he cuts with the spurn, and if outward, with the heel. These few instructions may be of use in purchasing horses; but I would advise one to get some experimental knowledge of them before he trusts to his own judgment, for the dealers have so many arts to hide the defects of their horses that the best of judges are often very much deceived.

How to tell the Age of a Horse by his Teeth.

The only sure way of telling a horse's age is by the teeth, and these only for a certain time; after which time there is nothing to depend on, although you can guess very near by the front teeth on his upper jaw, until he is about twelve or thirteen. This with the face of the horse and some other marks, enables one experienced in horses to guess very closely. There are six teeth above and six below in the fore part of the horse's mouth, from which we may judge of his age. They are called gatherers. When a colt is foaled he has no teeth in the front part of his mouth. In a few days two more come in the upper jaw and two below; again, in a few days, four more appear, but the corner teeth do not come for three or four months. These twelve teeth remain unchanged in the colt's mouth, until he is two or two and a half years old, when he begins to change them for permanent ones. Although the manner in which he has been fed regulates in a measure the time of change. Until he is in his eighth year, you can tell his age by his front teeth in the lower jaw; so I only speak of these. At first he sheds the two middle teeth of the six; these are succeeded by two permanent or horse teeth, of a deeper color and stronger, and grooved or fluted from top to bottom, with a black cavity in the centre; he is now about three. In the latter part of the fourth year the teeth on each side of the centre teeth undergo the same process, and he becomes possessed of four horse teeth in the middle with the natural black marks in the centre, and one colt's tooth only on each side. He next sheds his corner teeth; when he gets their successors his mouth is full. He has the black mark in all of the six teeth and is five years old. After the

horse is seventeen, the grinders wear down, and the nippers prevent the grinders from coming together, so he cannot masticate his food as well as a younger horse.

Weights to be carried in Trotting.

Weights to be carried by every trotting horse starting for a match, purse or stake. Every horse shall carry one hundred and forty-six pounds. If in harness, the weight of the sulky and harness not to be considered. Pacing horses liable to the same rule.

Race Distances.

A distance of mile heat, best three in five, shall be one hundred yards; for one mile heats, eighty yards; and for every additional heat, an additional eighty yards. The time between heats shall be, for one mile, twenty, and for every additional mile, five minutes.

To put Horses in Good Condition.

They need good care and clean food. Do not use Condition Powders, or such medicines. They are not needed, and are humbugs. If your horse is hide bound and out of condition, give him a good purge of linseed oil, or castor oil, one pint. Then give bran mashes, morning and evening. He will soon regain his appetite, and will be all right.—At any time when your horse loses his appetite check his food, and give him a mash. Give as little medicine as possible. By this treatment you will have healthy horses.

To keep Horses free from Diseases.

The stable must be clean and well ventilated. There is nothing more conducive to good health than pure air and clean food. The ceiling of the stable should be at least ten or twelve feet high, with ventilating box at the head, four inches square, running out at the roof.—The loft should be perfectly tight, so that the breath of the horse cannot rise and mix with the hay, which may be injured both in taste and wholesomeness. It is a bad plan to put hay in a rack. The horse breathes on it and makes it the less palatable and healthy. Feed from a box in front, and but a little at a time. He will neither waste it or otherwise injure it. The ventilation in the wall of the stable should be as high up as possible, so as not to injure him by draughts of air, from which he should always be kept. Filthy stables cause weak eyes, and a running at the nose. In many instances the decomposition of vegetable matter and the urine give out stimulating and unhealthy vapors, and a strong smell of hartshorn. How can it but cause inflammation of

the eyes, or lungs, or glanders, and farcy? Be careful to have your stables so that the urine will run off; but do not raise the planking much higher at the front, than at the back, for this will cause a strain of the back sinews, and lameness, and thickening up of the same. It is an unnatural way for a horse to stand. The stalls should have holes in the planking, and they should always be kept open. In summer, the horse should always, (if he stands on a dirt floor,) stand on straw, or litter of some kind; it relieves the feet in stamping. It is very injurious to keep horses in a dark stable; it is bad for their eyes, and many horses go blind from this cause. You should likewise avoid a glaring light, or white walls. Give a mellow light, with clean stabling, clean food, clean litter, and all will be well with the horse.

In regard to Horse Shoeing.

If you examine the horse's foot, while in his natural state, it will be be found almost round, and very elastic at the heel; the frog broad, plump, and of a soft, yielding character; the commissaries open and well defined, and the sole concave; the outside of the crust, from the heel to the toe, increased from a slight level to an angle of about forty-five degrees; consequently as the hoof grows it becomes wider and larger in proportion to the amount of horn secreted, and the narrower and shorter in proportion to the amount of horn cut away from the ground surface. If a shoe were fitted nicely and accurately to the foot, after being dressed down well, it would be found too narrow and short for the same foot, after the lapse of a few weeks. Now if any unyielding shoe of iron is nailed firmly to this naturally enlarged and elastic hoof, it prevents its natural freedom of expansion almost wholly; and does not, as the foot grows down, allow it to become wider at the quarters in proportion to the quantity of horn grown, as before being shod; and consequently the foot changes from the continued effect of the restraint from an almost round, and healthy foot, to a contracted and unhealthy condition, as generally seen in horses shod for a few years. The principles which should govern in shoeing are few and simple; and it is surprising to me that a matter involving such serious consequences should be conducted with so little consideration. The object of the shoer should be in trimming and preparing the hoof for the shoe, to keep the foot natural; and this involves the cutting away of any undue accumulation of horn affecting in the least its health and freedom; to carry out in the form of the shoe, that of the foot as nearly as possible; to fit and fasten the shoe to the foot so as to interfere least with its health and elasticity. The object in preparing the foot for the shoe is to remove any undue accumulation of horn destined to prevent its natural bearing, and the free, healthy action of its parts; and requires the cutting away of about the proportion that contact with the ground would have worn of, or so much as had grown since being shod last.—

If the shoes have been on a month, then the proportion of horn secreted in the time should be removed; if on two months, then the proportion of two months' growth. No definite rule can be given. The judgment must be governed by the circmstances of the case. The stronger and more rapid the growth of the foot, the more must be cut away; and the weaker and less horn produced, the less; to the extreme of simply leveling the crust a little, the better to conform to the shoe.—There is generally a far more rapid growth at the toe than at either the heels or quarters. More, therefore, will require to be taken off the toe, than off the other parts. Therefore shorten the toe and lower the heels, until you succeed in bringing down the bearing surface of the hoof upon the shoe to almost a level with the live horn of the sole. Be careful to make the heel level. Having lowered the crust to the necessary point, with the buttress, or knife, smooth it down; level with the rasp, the sole and frog, detach the old horn by exfoliation, as it becomes superabundant; the sole therefore would not need paring were it not for the restraining effect of the shoe upon the general functions of the foot, which is liable to prevent such detachment of the horn. When this is the case, the sole should be properly dressed out with an English shave, the end of which is shaped like an iron used at saw mills to mark and measure boards. The buttress is too large and square edged to dress out so concave a surface properly; and, unless great care is exercised, it will not only penetrate through the sole in some places, but leave others entirely neglected. While a good workman may work well with almost any kind of tools, such have also the faculty of adapting tools to the work. A horse's foot is not to be hacked and cut as if only a block of lifeless wood; and, if even only a lifeless machine, what care would be found necessary to preserve its harmony of action complete. The buttress does not seem to be at all adapted to dressing out the sole, and should not be used for that purpose. While we are obliged to find fault with the carelessness of blacksmiths in this respect, it is with the spirit of kindness, sensible that we ourselves are only dull pupils in the work of reform. We should be particular also in impressing the necessity of not confounding the bars with the substance of the sole, and cutting them down to the common level with the sole. Any man of common sense can see that the bearing of the bars should be the same as the outside of the crust upon the shoe, and that they offer a decided resistance to the contraction of the heels. The cutting away of the bars, to give the heel an open appearance, is inexcusable; and should never be done in a natural, healthy condition. The frog has a line of bearing with the hoof and by its elastic nature acts as a safeguard to the delicate machinery of the foot immediately over it, and helps to preserve the foot in its natural state. By keeping the heels spread it seems to be wisely intended to give life and health to the foot, permitting the heels to grow down. The addition of high heeled shoes raises the frog from its natural position, and causes it to shrink and harden,

and bears in consequence an important influnence in setting up a diseased action that generally results in the contraction of the foot. If the heels are square and high, and the hoof presents rather a long, narrow appearance, and is hollow on the bottom, there is a state of contraction going on, and you must not hesitate to dress down thoroughly. Do not hesitate, because the foot will appear small. Cut away until you are well down to a level with the live horn of the sole. If the foot is weak, use the same prudence in not cutting away too much. The shoer must always bear in mind that the sole must not rest upon the shoe. The sole, when not clogged with old horn, acts as a spring to the weight of of the horse; and if it rests upon the shoe an inflammation may be caused by the pressure of the coffin bone upon the sensitive laminae, which is liable, in consequence, to be so bruised, as to cause soreness and inflammation. The effect of such bruises are the most common at the angle of the inner heel, where the descending heel of the coffin bone, forcibly pressing the soft, sensible sole upon the horny sole, is apt to rupture one or more of the small blood vessels of the delicate fleshy substance connecting the crust of the coffin bone of the part, causing red spots, which are commonly called corns. Let the foot be so dressed down, and the shoe so approximated, that the bearing will come evenly upon the crust all the way round, without the sole touching the shoe. This requires the crust to be dressed level, and not burnt level by the shoe; and although well down to the live horn of the sole, it sould always be kept a little higher. The corners, between the bars and crust, should be well pared out, so that there is no danger of the sole resting upon the shoe.

The Shoe.

The principal object should be to have the shoe so formed, as to size, weight, fitting and fastening, as to combine the most advantages of protection and preserve the natural tread of the foot best; in weight it should be proportioned to the work or employment of the horse. If the horse walks principally upon the road, his shoes should be rather heavy. The ground surface of the shoe should correspond with the ground surface of the foot in its natural state, or in other words, it must have a concave surface corresponding with the concave surface of the foot. The nail holes should be punched coarse and in the centre of the web; if the hind shoe, four on a side and well forward; if the forward shoe, four on the outside and two or three well forward on the inside toe. As it is found necessary to retain the shoe, the manner of fastening the shoe is what really affects the foot, and which requires the most especial attention in shoeing.

Interfering Shoes.

First, find what part of the foot hits the opposite ankle, which you

can do by wrapping the ankle with a rag nicely; which color with some kind of coloring matter over where the opposite foot hits. You can then tell by driving where the color adheres and what portion of the crust hits the ankle. Remove this portion and have the shoe set well under the foot, but carefully fitted so as to support the foot safely by the bearing of the bar and heel. The hoof should be pared lower on the outside to turn the ankle that the other hoof may pass clear; yet if the inside sole is not dressed, the rim soon breaks and the inside is found to be actually lower than the outside. Shoes to prevent interfering should be light and of narrow web on the inside, with three nail holes near the toe. They should be straight at the point where they come in contact with the opposite leg. By adhering strictly to this principle of paring the foot and fitting and fastening of the shoe you will prevent a recurrence of the difficulty. Shoes to prevent over reaching should be long, and for the forward feet heavier, especially at the heels, and for the hind feet light with heavy toes. The hoof should be well pared at the toe.

The Foot and its Diseases.

The crust or wall is that part which is seen when the foot is placed upon the ground and reaches from the hair to the ground. It is deeper in front, where it is called the toe, shallower at the sides, which are called quarters, and of least depth behind, where it is termed the heel. It is placed flat upon the ground, but ascends obliquely backward and possesses different degrees of obliquity in different feet. In a sound hoof the proper degree of standing is calculated at forty-five degrees, or the fourth part of a semi-circle. This crust is thicker in front, being about half an inch, and at the quarters and heel is very much thinner. It is also thinner at the inner and outer quarters where the most weight is thrown upon. It is under the inner splint bone on which so much weight rests, and being thinner it is able to expand more, its elasticity is called more into play, and concussion and injury are avoided on account of its thinness and the additional weight which it bears. The inner heel wears away quicker than the outer, a circumstance which should never be forgotten by the smith; his object is to give a plain and level bearing to the whole crust. Thus it will be unnecessary to remove but very little, if any, from the inner heel, as it has worn away faster than the outside from the greater weight it bears, which would cause corns and quarter cracks, and even splints; the concussions being so much greater. This may all be avoided by paying a little attention when shoeing.

The Frog.

In the place between the bars, and exactly filling it, is the frog. It

is a triangular piece of horn projecting from the sole almost on a level with the crust, and covering and defending a soft and spongy substance called the sensible frog. It is wide at the heels, and above the shell or crust of the foot, and runs to a point like a wedge. This is to keep the heel apart and prevent the horse from slipping. It will adhere to the ice like rubber. There is a cleft commencing at the hock and running nearly two-thirds the length of the frog, which is firmly united to the sole, but of a nature entirely distinct from it, being a soft, spongy substance and very elastic. It never can be bruised until it has been cut, when it becomes a hard, horny substance; and by treading on anything solid when going fast, it springs or presses on the sensible part of the foot, and causes corns. Now this frog should never be cut or pared in the least. Let it look ever so ragged it is then healthy. It sheds every three months; but if the knife is used it is more or less injured.

The Sole.

This is the inner surface of the foot, and is both concave and elastic, and extends from the crust to the bars and frog. It is not as thick as the crust. Notwithstanding its situation there is not as much weight thrown on it as there is on the crust, because it was intended to expand, in order to prevent concussion when the weight was thrown upon it. It is thicker at the toe, and where it connects with the crust. The principle weight is thrown upon the toe by the coffin bone wedging in. It is not brittle in health, and it is somewhat hollow, which gives spring to it and lessens the shock of striking the ground when in rapid motion; for if the sole was flat there would be no spring to it, and it would be bruised by sudden contact with the ground. Thus you see that by cutting, the spring of the sole is injured, and the sole itself becomes dry, hard, and brittle; but if you never touched it, retains the moisture, keeps the foot from shrinking, and keeps it healthy.

The Coffin Bone.

Beneath the lower pastern, and entirely enclosed in the hoof, is the proper bone of the foot, the coffin bone. It fills about one-half of the fore part of the hoof, to which it is fitted. It is light and spongy and filled with numerous holes through which pass the blood vessels of the foot. These are necessarily numerous, considering the important and various secretions there going on, and the circulation could not be kept up if these vessels did not run through the substance of the bone. The holes about the coffin bone carry the blood to the little bones, with which it is covered. Those near the lower part go to the sole. As this bone is enclosed in the horny box of the crust no inconvenience can arise from an outward pressure, for the bone allows free passage to the blood, and prevents it from every obstruction. The fore part of the

coffin bone, besides being thus perforated, is curiously roughened for the attachment of numerous little leaves on its upper surface, is a concavity for the head of the lower pastern. In front is a striking prominence into which is inserted the exterior tendon of the foot at the back. It is sloped for articulation with the navicular bone, and more underneath it a depression for the reception of the flexor tendon. Continued down the leg, passing over the navicular bone, and then inserted into this bone, on either side, are projections called the heels of the coffin bone; and the bottom is hollowed to match the internal part of the sole. The most particular part of the coffin bone is the production of numerous little leaves around its front and sides. They are prolongations of the thick and elastic membrane covering the coffin bone, and consists of cartilaginous fleshy plates, corresponding with, and received between, the horny leaves that line the inside of the crust. The horny leaves are secreted from, or produced by the fleshy ligaments, and being five hundred in number, their union with each other is so strong that they are inseparable. When the animal is at rest the whole weight is supported by these leaves, and not on the sole. It is the contraction of the coffin muscle that causes so much pain when the horse is foundered. The foot is then feverish, the blood vessels are filled with hot blood, and the foot is very sensitive to the touch of the hammer, or any jar upon the crust. The elasticity of the sole prevents the foot from being bruised when in violent action. Between the coffin bone and horny sole is the sensible sole, which is of a ligamentous, or tendrous nature; well supplied with blood vessels and with nervous fibres, so that it is very sensitive. A small stone under the shoe will cause great inflamation, and corns are caused by the same. The smith needs to use great care in setting the shoe.

Contracted Feet.

Sometimes only one foot becomes contracted. This may be caused, in a cold climate, by leaving a snow-ball in the bottom of the foot. After the horse has been driven until he is very warm, the coffin muscle is then released by heat, and the snow-ball cools it so sudden that it contracts. In a few days the hoof shrinks to the muscles, thus contracted, leaving a ridge in the hoof. In a warm climate it may be caused by letting a horse stand, even a short time, in cool water, after exercising and heating the blood. If you wish to bathe your horse's legs, do it with warm water always. Then you avoid danger, and leave the limbs soft and pliable. Cutting away too much of the sole of the foot deprives it of the very substance which holds the moisture, and keeps the foot healthy. Cutting the frog makes it hard and horny, and when struck hard upon a stone it is pressed to the quick, causing fever. Both practices will cause contraction. When first discovered bathe the legs, from the knee down, in hot water. Do this twice a day, for two weeks; every

night stuffing the feet with clay. His shoes should merely rest on the rim of the foot. Never use a shoe with a swelled heel. When caused by cutting, stuff the feet with clay, and use the concave shoe. Never use ointments or grease of any description, upon the outside of the hoof, as they close the pores and create fever without remedying the cause of the disease.

Thrush.

This is a very disagreeable discharge of offensive matter from the cleft of the frog. It is caused from inflammation of the lower surface of the sensible frog, by which pus is secreted, together with, or instead of horn. If the frog is sound, the cleft sinks but a little way into it; but by contraction, or other causes, the cleft will penetrate to the sensible sole within. Through this fissure the discharge proceeds. It may be caused by bruises or filth. The sinking in at the quarters will cause the horn to press upon the frog, or cutting the frog will cause it to become hard and horny. It can readily be distinguished from any other disease by the offensive smell. Run a knife blade in the fissure and the discharge will assure you. To cure it, first poultice with linseed meal, put on hot, and let it remain twelve hours; then use a paste made of two ounces of blue vitriol, one ounce of white vitriol, powdered as fine as possible. Mix well with one pound of tar, and two pounds of lard. Apply this in the cleft. It may be put on tow and pushed in. Let it remain twelve hours, and then cleanse out with soft water and soap. When dry, make the second application; also renew the poultice at night, until all inflammation disappears. If you wish to dry it up quick, which I do not approve, you can use the spirits of salt, ten or fifteen drops at a time. Cleanse the foot out well, then crowd in fine salt and wash with beef brine. But in all cases of thrush, first use poultices to relieve the inflammation. After this, stuff the foot with clay. In dry weather, this will keep it cool and moist, and will make it less liable to be bruised. The horse should take physic during the time. To cleanse the blood use Barbadoes aloes, pulverized and mixed with linseed oil sufficient to make into balls,—dose one ounce.

Grease.

In many cases, swelled legs, although distinct from Grease, degenerate into it. This disease is inflammation of the skin of the heel, and very seldom comes on the fore legs. The the skin of the heel has a peculiar greasy feeling, and when inflamed the secretion of this greasy matter is stopped; the heel becomes red, dry and scurvy; and being so much in motion they very soon crack, and sometimes ulceration and fungus will extend over the whole heel. The first appearance of Grease is usually a dry scurvy state of the skin of the heel. They should now

be washed with castile soap and water, and relieved of all the hard substance that can be by soaking. Then wipe dry and sprinkle on pulverized verdigris. This will dry up; but when the heels are badly cracked and ulceration has commenced, it will be necessary to poultice them with linseed oil; or if that is not to be had, take carrots, boiled soft, and mashed fine. This is a good poultice for any inflamed part. When the inflammation is gone and there is a healthy discharge of matter, dress with an ointment of one ounce of rosin, two ounces of honey in the comb, two ounces of lard, and one ounce of calamine powder. This cools the heels very fast. If the fungus is not entirely gone, wash with two drachms blue vitriol in a pint of water. It is well to give a mild diuretic every third day, of one table spoonfull of pulverized rosin in a ball of bran mash. Give the horse bran mash while treating for this. Sassafras tea is good for him if the legs swell. After they are healed, bandage every night, and give moderate walking exercise. Give a light purge of linseed oil or Barbadoes aloes.

Cure for the Grease from Internal Causes.

If the horse be full of flesh, the cure must be begun by bleeding, rowels, and repeated purging; after which two ounces of the following balls should be given every other day for some time, and they will work by urine the day following: Four ounces of yellow rosin, two ounces of salts of prunel, one ounce of oil of juniper, two ounces salts of tartar, eight ounces castile soap, one ounce of camphor; put these into a mortar, with about two ounces of honey, or as much as will make them into balls, and they will carry off the offending humors, and free the blood from its noxious qualities; but at the same time that these internal remedies are taken, outward ones should not be omitted.

Founders, how Cured.

The chest founder is produced by violent exercise on a full stomach and drinking large quantities of cold crank water, by the use of mouldy bran, corn, or oats, or by eating large quantities of green food, such as oats, wheat, peas, barley, while performing hard labor. The seat of the disease is in the lungs. The heart and liver are also considerably enlarged, inasmuch that there is not room for them to perform their office with ease. The liver, lungs, diaphragm, and surrounding parts are all covered with large brown spots, and are much inflamed. There are many persons that hold that a horse can be foundered with grain. This is not so. The argument given is that they have driven horses, or have known cases where the horse was driven under a shed and fed without watering. This may be so, but that is no argument, after all; for a horse may be driven and stand where there is a cold blast of wind that would chill a horse as bad as water. This would

create founder as well as water. Anything cold would create contraction; where, on the contrary, grain would create heat, instead of cold; and heat would relax. So that argument is worth nothing. I will not pretend to say but that grain would injure a horse when hot. You might give him corn meal and it would bake in the maw, and there would be no passage. This would kill but not founder. You are well aware that to heat a tire, then place it over the felloe it is perfectly loose; but when you put on cold water it contracts to the felloe and straightens the wheel. So you will see at once that it is cold that causes founder. Cold contracts and heat relaxes. Grain would create heat. To cure it, take one and a half gallons of blood from the neck vein, then give as a physic, six drachms of barbadoes aloes, dissolved, or in balls; cover the horse up with a thick blanket, then commence bathing with as hot water as you can use. Keep this up for an hour at least, then stretch an old pantaloon leg over each of his fore legs, bind it tight around the hoof and fill it with hot boiled oats. Give as a drink, sassafras tea made from the root, and give bran mashes with a table spoonful of pulverized rosin. He should have a mash once a day for four or five days. This will cure him. But in case of founders of long standing, or even if the hoof has shrunk to the contraction of the muscle, it will be necessary to treat it somewhat differently. The bleeding should be omitted, the legs bathed twice a day instead of once, and the feet should be poulticed with flax seed meal at night, or in day time, if not at work. If he could run out to a marshy pasture, it would not be necessary to poultice so often; but he must have something to act upon the blood. Take of digitalis, four drachms; emetic tarter, four drachms; nitre, six drachms; divide these into two powders and give one in three days. Between the days that this is given, give bran mashes mixed with sassafras tea. This physic should be given once in three weeks. The feet always to be kept moist. It will take from three to four months to effect a cure, when of long standing. The muscles of the shoulder sometimes contract, as in sweeney. In this case, a seaton of from ten to fifteen inches long, must be used according to the contraction.

The Navicular Bone.

This is placed at the head of the coffin bone, and at the foot of the lower pastern, and is shaped like a wedge. Its office is to protect the coffin joint at the back part. The frog getting dry and feverish, would allow the ligaments to be bruised, and cause lameness; another reason why the foot needs great care.

Quarter Crack.

For this, pare with a sharp knife, from the hair down, taking away

the whole back part of the hoof down to the quick. Then pare the other down thin, then set your shoe only so far as the hoof runs. By this means the shoe cannot spring down upon the heel. The hoof will then grow down firm and sound.

Heaves.

Reasons, why it is not in the lungs. If the disease was in the lungs, it would create inflammation, and have the same effect as inflammation of the lungs by cold. The horse would be weak and drooping without appetite, and really could not be driven two miles, as any person would naturally drive a horse. But a heavey horse can be driven from ten to twelve miles an hour. This is positive proof that it is not in the lungs. Take a heavey horse and turn him out to pasture for two or three days, and he will breathe clear and easy, showing no sighs of the heaves.—The grass has not reached the lungs, still it has stopped the hard breathing. But if you will give the horse cold water to drink, he will cough. Has the water touched the lungs? No. But it has touched the disease. This is another reason why it is not in the lungs. I will tell you where the disease is, and what it is caused by. A dainty horse is not liable to heaves, but a hearty eater is; not from the amount of food that he eats, but from the hoggish way of eating. There are two pipes leading to the stomach and lungs. Where they meet there is a throttle valve. A horse, on eating coarse food scratches his throttle; then by a hard drive, and warming the horse, he takes cold in this wound and it becomes a running sore, or canker. By turning the horse to grass, the juice cleanses and washes the wound. The grass being cool takes the inflammation from the disease, the swelling is gone, and the horse breathes as free and easy as ever. This is positive proof that it is not in the lungs. Then by feeding with coarse, dry hay, it irritates and creates inflammation and causes the horse to breathe hard again.—To cure it, take balsam of fir and balsam copaiba, equal parts; add calcined magnesia to make into balls; give a ball about the size of the yolk of an egg, for fourteen days. This cure I have never known to fail. You should be careful about feeding, for two or three weeks, after giving the medicine. Feed cut feed, wet the hay, and mix in a little brown sugar, for a few days.

Lung Fever.

This disease always makes its appearance by a chill. The horse will shake and tremble like a person with the ague. Whilst the chill is on, take half a pint of fine salt, put in a bottle of water, and drench the horse. This will release him entirely from the chill, and create perspiration. He will be quite sick for a few minutes, but it will drive the cold entirely out, and he will look bright and feel entirely well in a

few hours. But if you should not discover him while the chill is on, it will require different treatment. If he has been free from the chill for five or six hours, the symptoms will be eyes inflamed, nostrils distended, breath short and quick, he will stand with his head down, his pulse from fifty to one hundred. You will find it under the jaw, just below where you buckle the throat latch. By putting your ear back of the fore leg you will hear a quick, heavy beating of the lungs. He will have no disposition to move, or eat; but will drink. He never lies down. These are sure signs of inflammation of the lungs. The causes of the inflammation of the lungs are many. It may be brought on by filthy stables, but is usually by sudden changes from heat to cold, and from cold to heat. The membrane that lines the cells of the lungs is very sensitive. There is also an intimate connection between the lungs and the pores of the skin. By stopping the insensible perspiration, a cold and cough ensue. A horse is driven until a sensible prespiration is pouring from him, then he is left in a current of air which closes the pores of the skin, thus arresting the perspiration and driving the inflammation, which it caused, to the lungs. The majority of cases are very sudden. At first, the pulse is not much quicker; but the artery is plainly to be felt under the finger, and of its usual size. The pulse no longer indicates the expansion of the vessel. In some cases it eludes a most delicate touch. The legs are cold, and the nostrils expanded; the flanks begin to heave with a quick and hurried motion, a symptom of pain; the membrane of the nose is very red; he stands with his legs abroad, his countenance indicates suffering, and he looks mournfully towards his flanks. He is unable to move, scarce ever lies down, if he does, it is only for a moment, from actual fatigue. The duration of this disease is very uncertain. It will, in some cases, destroy in fourteen to twenty hours, and sometimes they will last for weeks. In sudden attacks of this kind, the lungs are entirely destroyed, resembling one solid mass of blood. This disease invariably makes its appearance with a chill. The horse commences trembling and shaking, as if half frozen. At this stage of the disease, you should get up a reaction. Dissolve half a pint of fine salt in warm water, shake it well, and give as a drink; then blanket him, and in fifteen minutes he will be wet with perspiration. Bathe the legs in warm water. But if the fever has commenced, it will require different treatment. If it has been on six hours, it will be necessary to bleed, and very severely; so open as large an orifice in the vein as possible. The object is to get control of the blood. The heart is working very hard to force the blood through the lungs. Bleed until the pulse is much lower, or flutters, then bathe the legs with as hot water as he can bear. Bathe frequently to get up a circulation in the extremities. If the attack is a severe one, blister the brisket and the sides as high as the elbows. Use a mustard blister if it will do; if not, a fly blister, made with four ounces lard, one ounce rosin, and one ounce flies. It will not do to purge.

There is so much sympathy between the bowels and lungs, purging would transfer the inflammation to the bowels. In such a case you must use clysters. Take eight ounces epsom salts, dissolve in warm gruel, and inject. This will start the bowels, which are somewhat relaxed. You must now use cooling or sedative medicines. Take of digitalis, one drachm, one and a half of emetic tartar, and three of nitre. Give three times a day. This will have an immediate effect on the heart, lessening the number of pulsations, and producing an intermittent state of the pulse. Every six or seven beats, there will be a suspension, while two or three could be counted. From this he will amend. Now reduce the dose to one-half, and in a few days it will not be necessary to give any medicine of any kind. He should now have oat meal gruel, or flax-seed gruel; they are strengthening. Mashes may be given, or green food, in small quantities, for inhaling, which is one of the most essential thing to be done. Use digitalis, one-half ounce; nitre, one ounce; and of balsam fir and copaiba, two ounces each; mix these together with one pint of spirits, and add one pint hot rain water. Cover the horse all over, letting the blankets reach to the ground so that no air can get under them; then hold the mixture under his nose, and at the same time stick a hot iron in the compound and let him inhale the steam or fumes arising from the mixture. This will relieve the lungs from fever, drive the inflammation to the surface, and the cure is positive.

Adhesive Plasters.

These plasters should be used over parts that have been strained or otherwise weakened, and on deep seated inflammation of the loins, or back sinews. They are always to be applied warm, when they will adhere for a long time. The following is a good plaster: Take of common pitch, five ounces; yellow wax, one ounce; tar, six ounces; melt together. When cooled to blood heat, add half a drachm of pulverized cantharides, stir well together. When you apply it, warm or melt it over, and rub it well into the hair upon the sprain, then while it is yet warm, for it should be applied as hot as possible, spread over it a lint of tow, well picked; pat down with the hand. This will make a strong covering, and will remain for months. It will gradually remove deep seated inflammation, and, by its pressure, promotes the absorption of any callous, or thickening beneath; at the same time, as a bandage, it gives strength to the parts.

Physicing.

There is more injury done in the practice of this, than in any other medical treatment of the horse. The old practice has been to physic and bleed every spring; and this is necessary where the horse is really sick. When you change him from the pasture to the warm stable, and dry food, it is also good. The horse must be prepared for it. Give

three or four mashes before the physic, and in the majority of cases they will be sufficient without it, especially if the bowels are slightly moved; for really the less medicine given, the better. After the physic is given, the horse should have walking exercise for two hours, but when it begins to operate, he should be kept as still as possible, or the medicine would be likely to gripe, and perhaps irritate the intestinal canal, and cause inflammation. You can give him a small amount of hay, as much mash as he will eat, and as much water, with the chill off, as he chooses to drink. If he will not drink tepid water, give him about a quart of cold water, every hour. When the purging ceases, give a mash twice a day, until you give more physic, which should be only once a week. Barbadoes aloes is the best purgative, being always sure and safe. The dose with the horse prepared by bran mashes, would vary from five to seven drachms, the latter sufficient for any horse. You can dissolve in warm water, and give as a drench, or make into a ball with linseed oil, and lay upon the roots of the tongue, letting go the tongue at the same time. Linseed oil is uncertain, but safe in doses from a pound to a pound and a half. It leaves the horse in very good condition.

Poultices.

Few horsemen are aware of the value of these simple preparations, in abating inflammation, in relieving pain, cleansing wounds, and causing them to heal. They are the best kind of fomentations. They continue longer, and keep the pores open. In all inflammations of the foot they are very beneficial, and in cases of contraction, a poultice that retains the heat and moisture longest, is the best. They will relieve swellings, take out the soreness from the pores, and draw out the unnatural substances. Linseed meal makes the best poultice. It will hasten any tumor, that it is necessary to open, and cleanse any old one, causing a healthy discharge when it is offensive; but in this case, when the ulcers smell badly, add two ounces of pulverized charcoal, or chloride of lime, half an ounce, to one pound of meal. This is good in grease or cracked heels. A poultice should never be put on tight. Carrots are very good, mashed fine, after boiling soft. The coal may be used in this, also, where the parts smell offensively.

Wind Galls.

This appears oftener on the hind, than on the fore legs. It is a filling in of a mucous fluid in bags, or sacks. It is caused by undue pressure, from violent action, and by straining the tendon. These bags inflame, and fill the larger, and harder. They always form about the joint, as many tendons concentrate there. Very few horses are perfectly free from them. At first they may cause lameness, but in the majority of cases they do not. It has been thought that these bags were filled with

wind, and in some cases they have been opened; but this causes inflammation, and would lame the horse. The way to treat them is with a powerful blister directly on them, and then bandage. After the blister is formed, you must bathe it in some asstringent. A decoction of oak bark is good. By this treatment the mucous is taken up by the absorbents, and you will have a cure. You must be very careful in driving for several days.

Action of the Kidneys on the Blood.

The blood contains a great quantity of watery fluid, unnecessary for the nutriment or repair of the frame. There also mingles with it matter which would become noxious if allowed to accumulate too much. The kidneys are actually employed in separating these fluids, and in carrying off a substance, which, as an ingredient in the urine, is called the urea, and consists of what would be poisonous to the animal, if remaining. The kidneys are two large, glandular bodies, placed under the loins, very much the shape of a kidney bean. The right kidney is forward under the liver; the left is back by the stomach and spleen. A large artery runs to each, and carries about one-sixth part of the whole blood that circulates through the bone. It divides into numberless little branches, most complicated, and coiled upon each other.—The blood has waste parts, which, if allowed to remain, would be very injurious; and these must be separated from it. The fluid separated varies in quantity and composition, even during health; more so in the horse than any other animal; and there is no organ so much under our control as the kidneys. Diuretics are the most useful medicines, and at the same time most injurious if improperly used in fevers and inflammation generally. For diuretics, use nitre and digitalis, on account of their sedative effects. They stimulate the kidneys to separate more than the usual quantity of water from the blood, and lessen the quantity of the latter. The object in this is to reduce the circulation, and thus ease the heart in its labor, by calming the excitement. An overflow of blood causes the heating you will notice in lung fever. Diuretics lessen the blood and give more perfect control over the heart. In cases where the legs are swelled, the absorbents set to work and take up and pour into circulation the fluid which has been effused into them. The legs of some horses cannot be rendered fine, nor kept so without the use of diuretics; nor can what is called grease heel, frequently connected with these swellings, get cured without the use of them.—Always let the horse have plenty of tepid water, the more the better. You must always be careful not to keep him too warm, for if he sweats, the medicine, instead of stimulating the kidneys, passes off in perspiration.

Antimony.

There are several valuable preparations of this. The black sul-

phurate of antimony, a compound of sulphur and antimony, is a good alterative. It is given with more sulphur, and with nitre, in varying doses, according to the disease, and the slow and rapid effect to be produced. The dose, if you expect to continue it, should be at the most, four drachms. It should never be bought in powders, whatever may be the trouble to pulverize it; for it is frequently adulterated with lead, magnesia, forge-dust, and arsenic.

Sweeny.

The disease is on the side of the lame shoulder. The horse suffering from it will be quite lame, and will stand with one foot before the other; or, if it is in both shoulders, he will change from one to the other. The use of the shoulder is sluggish, and in breaking he will drag the foot, instead of raising it from the ground. It is caused by a strain, or bruise, or by favoring the foot when diseased in some other part. The membrane or muscle of the shoulder will shrink much, where the horse has not been lame long enough to know how to ease himself by standing. You can easily tell what the trouble is by pressing with the thumb upon the muscle, which may be shrunk but a little; yet when you press the point effected he will shrink from the touch. The only way this can be cured is by a seaton, or rowel. The object of this is to create inflammation of the membrane. This seaton in these diseases should be from eight to fifteen inches in length. The best article to use for it is tarred rigging rope. This should be turned every day for two or three weeks. To insert this, you must make an incision on the top through the skin and the membrane under the skin, the same at the bottom. Procure a long, thin, iron needle with a large eye, and thread with strong twine, to which fasten the rowel. Run the needle through the two openings, drawing the rowel through and then tie, leaving eight inches slack to tie with. In some cases it will be necessary to wet the rowel with oil of turpentine, or tincture of cantharides; either will do. Bathe the shoulder every day with as warm water as he can bear. If it has the desired effect, it will discharge freely. This will relax and loosen up the membrane, and make the parts fill out smooth. Keep it clean by soft water and soap so that the discharge will not remove the hair. If you apply grease on the hair under the cut it will prevent the hair from coming off.

Hide Bound.

This is not so much a shrinking of the fatty substance between the skin and the muscles, as it is an alteration of the skin itself. It is a drying up of the oily moisture of the skin. It thus becomes dry and hard. The scales to the cuticle no longer yield to the skin, but separating in every direction, turns the hair, and gives it a rough look, which is an indication that the horse is out of condition. The vessels of the

skin and bowels, as well as the stomach, are deranged. It is a symptom of disease of the digestive organs. At first, give a bran mash; and, if it can be had, sassafras tea; but, in severe cases, use levigated antimony, two drachms; nitre, three drachms; sulphur, five drachms. Give every night in a mash. The antimony acts on the skin, the sulphur on the bowels, and the nitre on the urinary organs. Rub him, and give him warm clothing. The skin will become loose, and the horse be in condition again.

Cough.

Use elecampane roots, hoarhound and smartweed, with six red pepper pods, to two oz. ginger root. Boil till all the strength is extracted, then strain through flannel. Add two quarts of molasses to every gallon of this extract, and boil all together for half an hour. Give one gill twice a day. Use an ox-horn, or a crooked tin horn. Raise the head, and draw the tongue out on the left side, put the small end of the horn on the roots of the tongue and empty the contents, then let go the tongue. Swab the throat every night with this mixture, using a whalebone with linen wrapped on the end. This is a sure cure for coughs among all diseases to which the noble creature is subject. Nothing has given more perplexity to farriers than a settled cough. Indeed, it too often defies all the attempts of art; and the horse frequently becomes asthmatical or broken-winded.

For Restoring Hair to Galled Spots on Horses.

Take one lb. red clover blossoms and six quarts of water. Simmer to a thick syrup, then add sufficient barbary tallow to make a paste.—This is the best ointment, for this purpose, that can be made.

For Spavin.

Five oz. euphorbium, two oz. spanish flies, one oz. iodine, dissolve with alcohol; one-half oz. red precipitate, one oz. corrosive sublimate, one-half oz. quicksilver, six oz. hog's lard, six oz. white turpentine, one fourth lb. verdigris; melt the lard and turpentine together; then, while hot, add all together. Mix well. When cold, fit for use. Rub it in thoroughly on the spavin every day for three days, then wash clean with soap suds. Omit for three days and repeat for three days again, and so on, until a perfect cure is produced. Should it blister, use it more cautiously.

For Blood Spavin.

One half pound blood root, one qt. alcohol, two oz. tannin, and a quarter of a pound of alum. Mix, and let it stand, shaking it several times a day, till the strength is all in the alcohol, and bathe the spavin twice a day, rubbing it in with the hand.

Cure for the Heaves.

Take smartweed, steep it in boiling water till the strength is all out; give one quart every day, mixed with bran, for ten days; give green or cut up feed, wet with water during the operation, and it will cure.

Anti-Spasmodics.

There are but few of these, and the horse is subject to but few spasmodic diseases. Opium is the best for general effect, and that exerted particularly on lock-jaw. The oil of terpentine is good as a specific for spasms of the bowels.

Worms in the Horse.

There are several kinds of worms in the intestines, and they are hurtful only when in large quantities. The long white worm resembles the common earth worm, and is from six to ten inches long. They are in the small intestines, and when in large numbers, consume much of the nutritive part of the food, or the mucous of the bowels; then the smaller and darker colored worm, called the needle worm, are in the large intestines, in many cases. They descend into the rectum in large numbers. They irritate the fundament, and annoy the horse. This is the trouble when they rub their tail very much. The horse shows this disease by falling off of flesh. His hide will be tight, and the hair looks bad, and sets forward; the eyes has a dull look, and at times he will scringe and shrink down. He sometimes passes worms, and he cannot be kept in condition. Use one oz. of aloes, dissolved in warm water, and give as an injection. This will succeed in most of cases; if not, give one pint of neatsfoot oil, as a drench, and one pint as an injection. This will not fail. Give mashes after this for a few days. It is well known that horses, which have many worms, can never thrive; or carry much flesh. If the breeding of these vermin were prevented, it would add much to the strength of the horse, and it might be done by giving him a decoction of bitter herbs, such as wormwood, in spring. It may be steeped in hot water, and given two or three times a week, or a decoction of wormwood, buck bean, gentian root and chamomile flowers, of each a large handful, boiled in a sufficient quantity of water, and given, will answer the end.

Anodynes.

Of these there is but one in horse practice. Opium is the only drug that will lull pain. It also acts as an astringent, in doses of one, two and three drachms.

Farcy, and how to Treat it.

When the farcy attacks only one part of a horse, and that when

the blood vessels are small, it may be easily cured; but when the plate vein is affected and turns corded, and especially when the crural veins, within the side of the thigh, are in that condition, the cure is very difficult; and the creature is rarely fit for anything but the lightest work after it. Bathe the legs every night in hot water, into which put a shovel of hot wood ashes, making a weak ley. When he regains his appetite, be very careful in feeding. Give him mashes, at least twice a day, until he gets his strength; then give green food, if possible. In very severe cases of farcy internal medicines will be necessary. Use of corrosive sublimate ten grains, increased to a scruple, with two drachms of gentian, and one of ginger. Repeat morning and night, until the ulcers disappear.

Pleurisy, how to be Treated.

This is an attack of the membrane covering the lungs, and the lining of the chest, called the pleura. The symptoms are nearly the same as in inflammation of the lungs. The horse has no disposition to lie down, or move about. The neck will be the same as in lung fever, the nostrils distended, and the membrane of the nose very red. He breathes very hard, full pulse. The blood however, is not obstructed in its passage through the lungs. By pressing on his side he will give symptoms of pain, in a very decided grunt. Blister both sides of the chest, and bathe the legs with hot water; or boil bran and put on an old pantaloon leg over his, and fill in around with hot bran. This will get up a circulation in the extremities. Then give one and a half drachms emetic tartar, two drachms digitalis, three drachms nitre; keep well covered up with warm clothing. Use one ounce cream tartar in two quarts tepid water for a drink. Be sure to keep the legs warm by hot applications, and bandages. Use these medicines until a cure is effected.

Staggers.

There is but little of this disease in the Northern States. But it exists to a great extent in the South. The food is the principal cause.—There is a great quantity of diseased corn used, and too much of any kind is generally given, then as much water as he will drink after it, which generates an unhealthy gas in the stomach, and causes distention. The blood is inflamed and rushes to the head, and the brain is somewhat inflamed. The horse staggers about, or becomes sluggish, and stands with his head down; the eyes glassy. In some cases he will rear and fall back, or run; he will not eat but hold the hay in his mouth, and then drop it. He sweats profusely, and in a short time will fall and die. First physic with one oz. of aloes dissolved in warm water, and give as a drink. In one hour, give half an oz. more of aloes, and continue this until it operates. As soon as the first aloes are

given, blister the head with a strong fly blister. Apply this over the brain, from below the ear, nearly down to the eye. Then bathe the legs with as hot water as you can use, and bandage them with flannel. Keep them as warm as possible. Then give one drachm of digitalis, one and a half of emetic tarter, three of nitre; If it is to be repeated, use half of the above amount in three hours. Then if he has any disposition to eat, give bran mash with one table spoonful of pulverized resin. Use this for a week, as he recovers, and feed and water lightly until he regains his strength. If he is bound up, it may be necessary to use injections, which are always beneficial.

Warbles, Sitfasts, and Stable Galls.

These are caused, in mnay cases, by using a blanket under the saddle in hot weather, thus scalding the back, and causing those little lumps to appear; and when they ulcerate they are called sitfasts. The ulcer has a calloused spot in the centre when they first make their appearance. Rest will remove them, but if the horse is to be used, you must remove the stuffing from the pad of the saddle, that the bearing may not come on the ulcer. Bathe in strong salt water, to remove the enlargement, but if it does not affect this, and it is really a sitfast, apply a blister. This will dissolve it. Then apply the resin and honey ointment to heal it. A horse with high withers, long back and broad loins, will make the best saddle nag, and carry his rider with ease. In hot weather it is a good practice to bathe the back with salt water when the saddle is removed at noon and night.

For Inflammation of the Lungs in a Horse.

First, a thorough bleeding; then give tincture veratrum viride, half an oz.; laudanum, four oz.; tincture aconite, one-fourth oz. Shake well together, and give a tea spoonful every three or four hours, in some water, well sweetened; and should it not bring down the pulse, the dose can be gradually increased to a table spoonful; and as soon as the horse recovers, so as to eat and lie down naturally, keep him on hay alone, perhaps with a few carrots, or potatoes, and daily give a bran mash, with saltpetre, crude antimony, and sulphur, for ten or fifteen days, and you will prevent dropsy of the chest, which is a sequel of the disease.

For Colic in Horses.

Sulphur ether, one pint; aromatic spirits ammonia, one pint; sweet spirits nitre, two pints; opium, quarter lb.; asafoetida, pure, half lb., put in a large bottle, let it stand fifteen days, with frequent shaking, and it will be fit for use. Dose, two oz., from two to four hours, until

the horse is relieved. It should be given in water, well sweetened.—Another remedy, but always safe; one oz. of laudanum, one oz. sweet spirits nitre, one oz. tincture asafoetida, one teaspoonful capsicum, three oz. carbonate soda, half pint whisky, half pint water. Mix, and give at one dose. If not better in twenty-five minutes, repeat half a dose.

Stoppage of Water,—How treated.

This disease, in most cases, is caused by allowing the horse to become foul, and what is called a beam, thereby forms in the end of the penis. The horse will stand and weave, or stretch out, then paw and kick his belly with his hind legs. He may drop down in harness, and sometimes break out in a profuse sweat. The only thing to be done in this case is to draw his yard carefully, and run the finger around the head, where you will find two or three hard substances; withdraw them and wash the sheath clean. Mix in about a tablespoonful of mustard in the water, so as to keep the horse from taking cold, and grease it well with lard. In some cases it originates from contraction of the muscles of the loins, or inaction of the kidneys. To cure this, bathe the loins with hot water for half an hour, then bathe with hot vinegar and pepper sauce, then cover the loins with three or four thicknesses of blankets. Then mix of turpentine, one oz.; sweet spirits of nitre, two oz., and give as a drink. Give bran mash, with one tablespoonful of resin in it, every day, for a week, and the cure is complete.

Colic, or Cholera in Mules.

This appears to be a prevalent disease on the plantations. It is brought on by giving too much food and water at one time, and then immediately putting them to work. The hard work retards digestion and a gas is generated from the food and water, which fills the stomach and bowels, and sets the bots at work. This gas would kill the bot; and, to save himself, he bores into the membrane of the stomach, or tries to get out at the meat pipe, or by the passage between the stomachs. They will thus stop up the passages sometimes, and kill the animal.—But if the passages are open, the gas will pass into the bowels, and then the disease is colic. He will be much swollen and distressed, breathe short and hard, and will fall, or lay down and get up, his ears will lop over on one side, and eyes look dull and heavy. When the mule is first taken, take him out of the stable and keep him as still as possible. In the majority of cases he will recover without the use of medicine. If he does not thus get over it, take one oz. laudanum, one oz. ether, two tablespoonfuls of soda, two drachms of peppermint, put into half a pint of hot gin, and give as a drench. Then give injections of one oz. aloes, dissolved in warm water. This is an effectual cure.

Colts brought up by hand.

It is a frequent remark that cosset colts are worse to break than

those that have never been handled at to two or three years old. The reason is that they are spoiled by petting them, and allowing them to do as they please. When playing with colts, you should always make them do as you wish; and then, if they are learned to do as you will in playing, they will not become stubborn, when you wish them to work. The great object in laying the horse down is to make him understand that we can do as we please with them, and then he sees that there is no use resenting, and we have gained our point. After this he obeys without difficulty, and that stubborn, wilful feeling is subdued. You may then teach him anything you please.

Vegetable Caustic.

Make a strong lye of hickory or oak ashes, put into an iron kettle, and evaporate to the consistency of thin molasses; then remove into a sand bath, and continue the evaporation to the consistency of honey.—Keep it in a ground stopper glass jar. This caustic is very valuable in fistulas, cancers, scrofulas, and indolent ulcers; particularly when there are sinuses necrosis, or decay of bone; and in all cases where there is proud flesh; and also to excite a healthy action of the parts. It removes fungus flesh, without exciting inflammation, and acts but little except on spongy or soft flesh.

To Cure Warts.

Take corrosive sublimate, and red precipitate powdered, and mix equal parts; will cure the worst wart in the world, on horses, or cattle. If the wart is large and loose, tie a fine, strong cord aroundt it, close to the skin. In a short time the wart will come off. Then apply the powder until the wart is eaten down below the skin; then wash off, and rub on a little sweet oil, and it will soon heal over. If the wart is dry, scratch it with the point of a knife, until it bleeds; then rub on the powder, it will make a dry scab; pick off the scab, and put on the powder again, until it is all eaten off.

Hoof Medicine.

Take resin, four oz.; beeswax, five oz.; lard, two lbs.; melt together, pour into a pot, add three oz. turpentine, two oz. finely pulverized verdigris, one lb. tallow; stir together until it gets cold. This is one of the best medicines for the hoof ever used. It is good for corks, or bruises of the foot.

To Restore the Appetite.

Use of pulverized caraway seeds and bruised raisins, four oz. each; of ginger and palm oil, two oz. each; give a small ball once a day until the appetite is restored. Use mashes at the same time.

For Stoppage of the Bowels.

Take two quarts of soft fresh horse manure, add one quart boiling hot water, then strain through a common cloth strainer. Give one pint as a drench. This will not fail, for man or beast. For a man, dose one teaspoonful every hour until it acts.

Salve for Man or Horse.

For all kinds of old sores, use honey and resin, melted together; add lard enough to make a paste. When cool, it is fit for use. There is no better salve than this. Its medicinal qualities are excellent.

To Soften the Feet.

Spirits of tar, two oz.; fish oil, four oz.; this is very penetrating to use where the feet are hard and brittle. Rub it in with a brush upon the crust and sole every night.

Stifle.

This is a strain of the stifle muscles; only the stifle joint never gets out; if it should, the horse would be worthless. The stifle shoe should never be used. Take the whites of six eggs and two ounces of alum, pulverized. Mix well together, and rub on the stifle muscles; dry with a hot iron. One application will probably be sufficient. Then take one oz. of sugar lead, one pint of alcohol, mix, and apply three times a day, until a cure is effected.

Tonics.

Where it is necessary to use tonics, gentian is the best vegetable, especially in chronic debility. It is best united with chamomile and ginger, one drachm each. Give in balls.

Mercurial Ointment.

Of quicksilver, one oz.; lard, three oz. Stir until there are no globules to be seen. This is used some times in preparing sprains and spavins for the regular spavin ointment, rubbed on once a day, before the ointment. For all splints, bruises, and swelling of the limbs, use thoroughwort and mullen, steeped and applied as hot as possible with bandages.

Spavin and Ringbone.

Cantharides, four oz.; origanum, two oz.; sulphate of zinc, one oz.; venice turpentine, three oz.; oil vitriol, two oz.; fresh lard one pound. Shave the hair from the part diseased, and rub the parts with the medi-

cine. You must use your own judgment in using this medicine. That is in the length of time necessary to remove the callous. It must be used every other day. This will dissolve the ossified substance, and ooze it out. When you see the lump is diminished enough, then use the same astringent as I have directed in the other case; that is white oak bark, and alum, a quarter pound to half a gallon of bark juice, boiled down to a strong decoction. Use morning and evening. The first named disease comes from the lower part of the gambril joint. It is caused by a strain or bruise. Either will cause it. This opens the pores and causes the joint to become stiff and sore. The horse sometimes becomes lame before enlargement is perceptible. In some cases it will continue to grow for two years. It will then become a hard bone. The enlargement at this stage cannot be removed. You may kill the disease, and kill the lameness. The great object with this disease is, to stop the leakage. There has nothing been used as an astringent whereby removing the lump. Without the astringent, it leaves the parts loose and open; but if used, it stops and closes the pores. Then by letting the horse stand until it heaves, becomes firm. Four oz. green euphorbium, fine; one oz. spanish flies, pulverized; four oz. corrosive sublimate, four oz. red precipitate, six oz. white pine turpentine, four oz. iodine, six oz. lard. Melt the lard and turpentine together. After it is nearly cold, add the other articles and stir until it is cold; it is then ready for use. Rub the enlargement until it is warm, then rub on the ointment, and let it remain twenty-four hours. Then take lard and rub upon it, until all of the ointment is taken out. Let it remain one day, then apply the medicine again, keep this up until the enlargement is gone.—Then use oak bark as an astringent to bathe it in, and bandage until well, keeping it well saturated with the oak bark water. You may use the same ointment for thoroughpin. After it is blistered sufficiently deep, use the oak bark and bandages, until healed. The same for blood sprain and wind puffs. It will be necessary to use a pad under the bandage in thoroughpin to make it bear evenly. Keep the horse quiet while using these medicines, and on a low diet.

How to Clean and Oil Harness.

First take the harness apart, having each strap and piece by itself; then wash in warm soap suds. When cleaned, black every part with the following dye:—one oz. extract logwood, twelve grains bi-chromate of potash, both powdered fine, then put into it two quarts of boiling rain water and stir until it is all dissolved. When cool it may be used. You can bottle and keep for future use, if you wish. It may be applied with a shoe brush, or anything else convenient. When the dye has struck in, you may oil each part with neatsfoot oil, applied with a paint brush, or any thing else convenient. For second oiling, use one-third castor oil, and two-thirds neatsfoot oil, mixed; a few hours after wipe clean with a woolen cloth, which gives the harness a glossy appearance.

This preparation does not injure the leather, or stitching, makes it soft and pliable, and obviates the necessity of oiling as often as is necessary by the ordinary method.

Strength of Food used for Horses.

It will, perhaps, be interesting to the horseman and farrier to know how much nutritive matter is contained in the different kinds of food given the horse. The quantity cannot be considered as expressing the actual value of each, because other circumstances, besides the simple quantity of nutriment, seem to influence their effect in supporting the strength and condition of the horse; yet many a useful hint may be learned, when the farmer looks over the produce of his soil.

1000	parts of	Wheat	contains	955	parts of	nutritive matter.
"	"	Barley	"	950	"	"
"	"	Oats	"	744	"	"
"	"	Peas	"	573	"	"
"	"	Beans	"	570	"	"
"	"	Potatoes	"	230	"	"
"	"	Red Beets	"	148	"	"
"	"	Parsnips	"	99	"	"
"	"	Carrots	"	98	"	"

Of the grasses, 1000 parts of the meadow catstail contains, at the time of seeding, 98 parts of nutritive matter; narrow leaved meadow grass, in seed, and sweet scented soft grass, in flower, 95; narrow leaved and flat stalked meadow grass, in flower, fertile meadow grass in seed, and talefescue in flower, 93; creeping soft grass, in flower, 78; common turnips, 42; long rooted clover, 39; white clover, 32; and lucern, 23. [The above table is from the Agricultural Chemistry.]

To Cure Cribbing.

If caused by irritation of the teeth growing too near together, saw between the lower and upper front teeth. If a simple habit, arrange the stall so as to make it impossible for him to crib. This you can do by making the stall plain, with a simple box manger in front, rather low, but extending the whole width of the stall. Immediately over the front edge of this plain box manger, hang a roller of about six inches in diameter, on pivots, which must be so arranged that it will turn easily.—This roller, extending clear across the manger, offers the only means within reach, on which to crib. The horse, in cribbing, will press the front teeth firmly upon the roller, pulling it down and towards him, which causes the roller to turn from under his mouth, and he is defeated in his efforts. There is no trouble in breaking a young horse of this habit by this means. A very good way is to feed a horse from a basket, hung loosely by a cord to something over head. The roller properly adjusted is, however, much the best means.

To Prevent Horses from Jumping.

Have a good firm strap halter made, that will fit the horse nicely,

with a wide strap stitched to each side so as to come over the eyes.—Cut holes in these straps over each eye; over these eye holes put fine wire cloth, supported nicely by wires, so that it will not possibly touch the eye. Before a horse attempts jumping over a fence he will put his head over to calculate upon the height and distance he is about to jump; but by looking through this wire cloth everything is so magnified in appearance, that he is disconcerted in his efforts to do so and is afraid to jump.

Bots, or Grubs.

There are a great many horses lost with this disease. It is impossible to put anything down a horse to kill a bot that would not kill the horse. I will take what the most of farriers will prescribe, and kill any horse in three or four days; and I will give you the reasons for it. First, the bot never works when the stomach is in order. As soon as the gasses of the stomach become deranged, the bot goes to work; and you can derange the stomach by giving strong medicine. The bot works in the maw. After he gets worked in a short distance, you can put nothing there that he can taste, without letting loose from the maw; and by giving strong medicine, anything that has a tendency to burn, or hurt the bot, he would work into the maw to get rid of the medicine; and if you put any sweets down, the bot could not eat it, because his head is in. Now I will give you a sure and a positive cure for this disease.—Take a pail half full of hot water, set a quart bottle down in the hot water, then bleed the horse in the neck vein, and let the blood run into the bottle. When full drench the horse with this hot blood. The blood goes to the maw so much hotter than the natural stomach, that the bot becomes released and lets loose. He then sucks his fill of this sweet blood and passes off from the horse.

Quinsy.

The symptoms of this disease are something like inflammation of the lungs; difficulty of breathing, eyes inflamed, nostrils distended, breath quick and short. He stands with his head down, and has no disposition to move about; and you will hear a rattling in the throat, caused by an accumulation of mucus matter in the glottis or throttle, which becomes swollen so as to be perceivable on the outside of the throat. A horse with this disease sometimes has an inclination to eat, but with the lung fever, never. Quinsy is entirely an affection of the glands of the head and throat, distinct from the lungs. Take one oz. pulverized aloes, to one-half oz. oil of sassafras, mix with a little flour to make it stick, and then make into balls the size of a black walnut. This quantity is for a dose. Open the mouth, pull out the tongue, put the ball on the roots of the tongue. This is the easiest way to give medicine. A thick heavy blister should be drawn on the throat, and a mustard or fly poultice to draw the inflammation to the surface. Bathe

the limbs with hot water, and bandage from the hoof to the knee.—Bathe three times a day. When he has a disposition to eat, give a mash of scalded wheat bran, two quarts, twice a day. Give no hay or grain for three or four days. Then, if he breathes easy, you can increase the feed. Keep the horse from the wind and well blanketed.

Distemper.

This is a disease that all colts are liable to, and if taken in time, there will be no danger of swelling in the throat. This frequently causes thick wind, by distempers breaking in the throat. It becomes a callous where the opening in the throat was; then by checking the horse up, there is not room for the wind, and he wheezes; but as soon as he stops he breathes easy again. When this disease first makes its appearance, bleed freely from the neck vein, then give from half to one pint of linseed oil, with three drachms of sassafras oil. This thins and purifies the blood.

Nicking.

There are two different modes of nicking. I will give the best and easiest. To make a horse carry an elegant tail, is attended with some uncertainty. It much depends upon the spirit, disposition, form, and vigor of the bone of the tail. A horse of good spirit, tolerable shape, and a small bone in the tail, can be made to carry an elegant tail with the greatest ease; particularly if he carries a tolerable natural tail; but a dull, leather-headed, flop-eared horse, with a remarkably large bone in the tail, will set you a task, although you may break the bone in two or three places. Indeed, there is so much difference in horses, that some judgment must be exercised about the best mode to be adopted for the accomplishment of the object in view. Nothing can more disfigure the appearance of a horse than to be half nicked. The form of the tail, when this unfortunately happens, departs from the simplicity of nature, and never attains the elegance of art. I shall now proceed to the best method of nicking every description of horse; and which, if attended to, will seldom or never fail to succeed. The horse should be confined in stocks, fitted for that purpose. The tail then should be platted up and clubbed at the end, turned over a small stick, and securely tied with a string. Being prepared with a knife, made for that purpose, turn the tail up in a direct line with the back. Commence the operation by making an incision about one inch from the rump, close to the hair; cut the cords in one place, on each side, leaving an incision only about the size of the knife blade. Be very careful not to touch the bone with the knife, for if so, it would create inflammation, and the hair would come out. Great pains should be taken to have the weights equal, in order to keep the tail in a perpendicular direction, and prevent it from turning to either side during the time of healing; as a horse that carries his tail to one side, instead of being elegantly nicked,

is ruined. The horse many times carries a crooked tail before he has been nicked. To straighten the tail, cut the top cord. The under cord depresses the tail, and the top one raises it. When standing the tail is straight. You will see at once that it is the top cord. In cutting the cord, to straighten, cut the long cord, and the short cord will pass by on a lap, and grow together, leaving the tail as strong as ever. Pulling is not required in straightening the tail.

Scours.

This is a disease which requires no description. You will know it when it comes. It is the same as cholera in a man, but is very easy to manage. In a warm climate it is very dangerous, as two-thirds of the horses taken with it die in less than four days. Boil red or white oak bark to a strong ooze; put two tablespoonfuls of cream of tartar to one quart of this decoction. Give to drink, or as a drench. Then use the bark water for injection. Keep this up until the purging is stopped. Then give a mash of scalded wheat bran twice a day. Give no hay or grain, or you will cause a relapse. He will have a good appetite, but be very careful for several days, and when you commence feeding, feed very light. A positive cure.

Blind Staggers.

The cause of this disease is too much food and water. In giving as much as a horse can eat, then give as much water as he will drink in driving. The grain becomes swollen and the stomach distressed by undigested food. The distention of the stomach prevents the passage of the blood, which causes it to flow to the head, and makes him crazy and blind. Sometimes he will fall back, at other times run, and is apt to run off from a bluff, or against any object that may be in his way.—If the disease is in its worst stages, split the skin of the forehead and fill with salt and black pepper. Then, if you can get sassafras roots, boil them to a tea and give one gallon twice a day. Bleed one gallon from the neck vein. Feed light with bran mash. Do not use any very hearty food for two weeks. This is a safe cure.

For Weakness across the Loins.

This originates, many times, from a stoppage of water. It is not always what would be called gravel. It may be from contraction of the muscles across the loins. The more the horse strains the more contraction it would cause. He becomes stiff and it is difficult for him to move his hind parts. Give one oz. pulverized aloes, one oz. sweet spirits of nitre, one oz. oil sassafras; give this at one dose, made into small balls. Then bathe the loins with hot pepper sauce. Blanket the horse well, putting several thicknesses over the loins. As soon as he can

stand give two quarts of bran mash, with one table spoonful of powdered resin. Give this for three days, and keep the loins as warm as possible. Also use this liniment: two oz. origanum, two oz. oil of sassafras, two oz. spirits turpentine; mix well together, bathe twice a day.

Stocked or Swollen Legs.

This is caused by sudden heats and colds. Bathe the legs from the hoof to the knee in as hot water as he will bear, and then bandage them. The hot water opens the pores and thins the blood that has become thick and will not circulate well. Make a strong tea of sassafras roots and give it to drink. If this is not to be had, give as a purge one pint of linseed oil, half an oz. of oil sassafras. Feed light. Give bran mash with one tablespoonful of cream tartar for a few nights.

How to Ease Horse Distemper.

If the glands of the neck are not swollen much, give half of a small paper of chewing tobacco, morning and evening, in a warm bran mash, and give no hay, but a little cut straw, wet with bran mixed in. If the glands of the neck are swollen, then apply a warm poultice, made of wheat bran and hot vinegar, changing as often as it gets dry, and be sure to get down him all the flaxseed tea you can, or slippery elm tea will answer, and let this be his constant drink. Be cautious to keep the horse from taking cold in any way, and keep on a blanket. Thus you will save many a noble animal. Be cautious never to bleed your horse during the horse distemper, or physic him any more than you are able to do with the bran mash.

Remedy for Bots,

Which will cure them in a few days. Eight oz. oil of turpentine, one qt. alcohol; mix and bottle for use. Dose, five oz. in the feed, once a day, for eight days. This will effectually remove them.

For Inflamed Swellings, or Lame Shoulder.

Equal parts oil of amber, oil of spike, camphor gum, and ether.

To Cure Heaves.

Oil tar, one oz.; oil amber, one oz.; mix, and give twenty drops in feed, daily.

Physic Ball.

Barbadoes aloes, one lb.; syrup buckthorn, three oz.; codliver oil, three oz.; melt the whole and stir till cold. In winter, add a little water. Make into eighteen pills, and give one every four hours, or as much as will move the bowels.

Diuretic Drops,

That are reliable for stoppage of water, foul water, or inflammation of the kidneys, in all cases. Take of sweet spirits of nitre, four oz.; balsam copaiba, two oz.; oil juniper, two oz.; spirits turpentine, two oz.; gum camphor, pulverized, one oz.; mix all together, and shake well. Bottle, and it is for use, for man or beast, under all circumstances where a diuretic is required. Dose for a horse, one ounce in half a pint of milk, once in six hours. For a man, one tea spoonful in a table spoonful of milk, once in six hours. Be sure to shake the ingredients up well before turning out for use.

Colic.

This is caused by giving too much feed and water, or by watering often on the road. The water reduces the juices of the stomach, disabling digestion, and causing the grain to swell, generates a gas in the stomach which, passing into the bowels, causes the acute pain and colic. He becomes restive, lies down, rolls about, and gives many signs of pain. Many times the horse has bots and colic at the same time. The only difference in the symptoms being that in colic the ears are cold, and in bots they are warm. Take one and a half oz. of laudanum, one oz. ether, two tablespoonfuls soda, in half pint warm water. Give as a drench. Do not exercise the horse with this disease, as exercise causes the gases to move from one part of the bowels to another, each time causing pain; therefore keep him as quiet as possible.

Fistula and Pole Evil.

These diseases are both of the same nature, caused by a bruise, and the other part becomes swollen, and a mattery substance forms in the flesh; and, as the disease becomes seated, it fills in with pips, and roots, and increases the inflammation. When this disease first makes its appearance it can be driven away by blistering, and drawing the inflammation to one point; but after it forms in roots, or pips, the only way of getting rid of it is to eat out or kill the roots of the disease. The most effectual way of doing this is to take one oz. of pulverized euphorbium, one-half oz. pulv. spanish flies, one-half oz. tinct. cantharides, one oz. iodine, one oz. corrosive sublimate, one oz. red precipitate, one and half oz. white pine turpentine, one and a half oz. lard; melt the lard and turpentine together, and when it becomes blood warm, as it is cooling off, add the other articles. Use a large dish to mix them in, for when you put them together the mixture will foam. Stir until cool. It is then ready for use. If the sore has not broken, use it on the outside until you draw the disease to the surface. If it has broken put the salve in the wound. It will eat out all of the diseased flesh. When you wish to heal the wound, wash clean with soap, then use as a salve, powdered resin and honey,—the best healing salve for horseflesh ever used.

Scratches.

This is a disease that effects great injury to the horse, if not checked in time. In many cases the legs become swollen to the gambrel, and finally calloused, so that it would be impossible ever to remove it; but if taken in time it will be easily managed. First, wash clean with soap and soft water, then take pulverized verdigris and sprinkle on the outside. This will kill the bad flesh. Repeat for several days until it has a healthy appearance. Then wash and it will heal. There is another disease springing from the same, called grease heel, which will require something more powerful. Take a week potash. This will take off the bad flesh very fast will be all you can do. diseased flesh is taken off, then wash clean. Use the resin and honey salve. The horse should be thoroughly bled, and a pint of linseed oil, as a purge, should be given to cleanse the blood.

Cure for Wind Galls.

Olive oil, three oz.; nitric acid, one oz.; rubbed in as much daily, or every second or third day, as it will bear, without starting the hair.

Corns,—How to Cure them.

Corns are generally caused by the shoe being worn too long. They appear in the angle of the hoof, near the heel. Cut the corn well down, but not to the quick; fit the shoe so that it does not press upon that part, then saturate well with pine sap, or gum, which is found exuding from pine trees. When cut, fill the parts nicely with tow, and put on the shoe; remembering that the shoe must be so fitted as not to oblige the part to support but very slightly, if any, the weight of the horse.—Horses with corns must be oftener and more carefully shod than those free from them.

For Kicks, Bruises, Cuts, or Swollen Legs.

Bathe the swollen parts with hot water, three times a day. As soon as you are through bathing, bandage the leg, but not tight. Take off the bandage every time you bathe. By using hot water, it opens the pores, and leaves everything soft and pliable, entirely removes the swelling, and prevents it from becoming calloused. If the cut is large, and a bad sore, use the resin and honey salve, which is the most healing of anything that can be used. Horses that cut themselves by interfering, and the pastern becomes swollen and sore, bathe with hot water. It will keep it from enlarging, and will heal it up and leave the leg smooth. Liniments are very bad usually, they thicken the skin and leave the parts affected enlarged, but by bathing and bandaging it will leave the leg as smooth as before the cut.

Weak Eyes.

There is no such disease as Hocks. It is only caused by inflamma-

tion, which causes the washer of the eye to become swollen and protrude out, and some say this is Hocks. They never should be cut. By rowelling at the side of the eye, it will draw the inflammation from the eye to the surface, and cure the disease. Sometimes the eye becomes weak from wolf teeth. These should be knocked off. They will be found on the upper jaw. I would not advise the use of medicine in the eye. It will increase the inflammation.

Sprung Knees and Springhalt.

These diseases are [illegible] is contraction of the muscles, caused by [illegible] long standing. Springhalt comes from these causes. Sprung knee is invariably caused by a strain, which contracts the muscle of the arm. By the contraction of the muscle, it draws the cord, and causes the knee to get weak and crooked. The cords are swollen, which causes persons to doctor the cords. This will do no good, for it is impossible to relax a cord. In fact, the cord itself is not contracted, it is the contraction of the muscle which draws the cord. So by relaxing the muscle, it would drop the cords to their proper places, and give relief. Springhalt is the same. It is the contraction of the inside muscle of the thighs. By relaxing the muscle you cure the disease. Take the common land turtle and try them down, and use the oil by rubbing on the muscle. This will relax and cure the disease.

Blistering.

The most effectual blister is to make a blister ointment, as follows: One drachm of flies, one drachm of resin, four oz. lard; melt the resin and lard together, then add the flies. Rub the parts with the hand until you create a heat, then apply the blister. This is good for strain in the pastern. The best liquid blister is cantharides and turpentine, equal parts.

Thumps in the Horse.

This disease is caused by too much food and water, and fast driving. By filling the stomach with food and water, then driving fast, the stomach becomes distressed with undigested food, which prevents the inflating of the lungs. The muscles of the lungs become sore and weak, and cause them to thump. If this disease is of long standing, it will be incurable; but by a moderate quantity of water, and a reasonable quantity of grain, you will prevent this disease. It is brought on entirely by heavy feeding and watering, with fast driving.

Big Head and Big Jaw.

These diseases are something the same as sprain. The bony sub-

stances form a deposit and become ossified. Whilst this disease is in a gristly substance, it can be cured; but after it becomes ossified, it will be incurable. Two oz. gum euphorbium, fine; one oz. spanish flies, fine; two oz. corrosive sublimate, two oz. iodine, three oz. white pine turpentine, three oz. lard. Melt the lard and turpentine together, then add the others. This, if a cure is possible, will effect it. The horse should be kept dry, and not fed very hearty. Use bran mashes with one tablespoonful of saltpeter, twice a week. Give one pint of linseed oil the first week. This will be all you can do.

Cribbing.

This disease originates from a sour stomach, first caused by habit in biting the crib whilst eating; and in so doing, the horse swallows wind which causes the stomach to become sour. Over-eating and drinking would aid in this disease. A horse with this disease is the same as a person that belches, and in the end, the same as a dyspeptic. Take one tablespoonful pulv. charcoal, and one tablespoonful sal soda, every other day until a cure is effected. The horse should be fastened in some place where he cannot get hold of anything to bite. Fasten in the middle of the floor, and feed him from a basket fastened on the head. By this means he will forget the habit of biting his trough.

To Recruit a Horse that is Hidebound, or otherwise out of order.

Saltpeter, four oz.; crude antimony, one oz.; sulphur, three oz.—The saltpeter and antimony should be finely pulverized, then add the sulphurand mix the whole well together. Dose, one tablespoonful in a bran mash, daily.

How Horses can be taught to perform tricks.

Many of the readers of this book may desire to learn something of the mode of teaching horses such tricks as they may be able to accomplish. It will gratify me, therefore, if I afford them such information on this head as will prove interesting and useful, recommending to them that no horse should have more than two lessons per diem, of not less than half, not to exceed three-quarters of an hour in length.

To make him low.—Take a pin in your right hand, between the thumb and fore finger, and stand before, but a little to the left of your horse; then prick on the breast very lightly, as if a fly was biting; which, to relieve, he will bring down his head, which you will accept as yes, and for which you will reward in the usual manner by caressing and feeding. Then repeat, and so continue until he brings down the head the moment he sees the least motion of your hand towards his breast; or substitute some signal which he will understand readily.

To make him say, "No."—Stand by your horse near the shoulder, holding the pin in your hand, with which prick him lightly on the withers. To drive it away, he will shake his head. You then caress as before, and so repeating until he will shake his head at the least indication of your touching him with a pin. You can train your horse so nicely in this way, in a short time, as to cause him to shake his head, or bow, by merely turning the hand a little, or moving it towards him.

To teach him to kiss you.—Teach him first to take an apple out of your hand; when gradually raise the hand nearer the mouth, at each repetition, until you require him to take it from your mouth; holding it with the hand, telling him at the same time to kiss you. He will soon learn to reach his nose up to your mouth; first, to get his apple, but finally, because commanded to do so. Simply repeat until perfect.

To shake hands.—Tie a short strap to the forward foot, below the fetlock. Stand directly behind the horse, holding the end of the strap in your hand. Then say, "shake hands, sir;" and immediately after commanding him to do so, pull upon the strap, which will bring his foot up, and which you are to accept as shaking hands; thanking him for it by caressing and feeding. By a little practice, a horse may be easily trained to approach, make a bow, shake hands, lie down, sit up, follow like a dog, etc.

To make him sit up.— When your horse will lie down readily, you can then teach him to sit up like a dog, easily. If young, not very heavy, or strong, you can easily prevent his getting up without tying him down. First, cause him to lie down, having on him a common bridle with the reins over his neck. Then step behind him and place the right foot firmly upon the tail, the reins in your hand. Then say, "Get up, sir." Your standing on his tail will prevent his raising any further than on his fore feet. Repeat a few times. Use good judgment, caress, reward, and you will soon have the trick taught perfectly.

To make a Foundered and Spavined Horse go off limber.—Take one oz. tinct. cayenne, two oz. laudanum, one pint alcohol. Rub the shoulders well with warm water, then rub the above on his shoulders and backbone. Give him one oz. of laudanum and one pint of gin. Put it down his throat with a pint bottle. Put his feet in warm water as hot as he can bear. Take a little spirits of turpentine, rub it on the bottom part of his feet with a sponge, after taking them out of the water. Drive him about half a mile, or a mile, until he comes out as limber as a rag. If he does not surrender to his pain, tie a thin cord around the end of his tongue.

To make old Horses appear young.—Take one oz. tinct. of asafoetida, one oz. tinct. cantharides, one oz. oil of cloves, one oz. oil of cinnamon, two oz. antimony, one oz. fenugreek, and one gallon of fourth-proof brandy; let it stand ten days. Dose, ten drops in one gallon of water.

To make a Horse appear as if foundered.—Take a fine wire and fasten it around the pastern joint at night. Smooth the hair down over it nicely, and by morning he will walk as stiff as if foundered.

To make a Horse fleshy in a short time.—Feed with buckwheat bran, to which add a little of the shorts. Keep him in a dark stable. Half a day's drive will make a horse fatted in this poor way.

To make a Horse stand by his feed and not eat it.— Grease the front teeth and roof of the mouth with common tallow, and he will not eat until you wash it out.

To make a true-pulling Horse baulk.—Take one oz. tinct. of cantharides, and one drachm of corrosive sublimate. Mix together and bathe the shoulders at night.

How to distinguish between Distemper and Glanders.— The discharge from the nose, if glanders, will sink in water; if distemper, it will not.

How to make a Horse appear as if he had the Glanders.— Melt fresh butter and pour in his ears.

THE END.

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